NEW MYDAIDAE (DIPTERA) FROM THE NAMIB DESERT AND SOUTH-WESTERN AFRICA

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(With 8 figures)

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Contents

Introduction

Since my revision (Hesse 1969) of the Mydaidae of southern Africa some interesting new genera and species of this family, from various parts of South West Africa and the Namib Desert, have been submitted to me for identification and others have been very kindly presented to the South African Museum.

As South West Africa is faunistically one of the most interesting territories in southern Africa, with its southern arid parts, its semi-desert east passing into the Kalahari, its western coastal Namib Desert, its central grassland savannah and broken thorn bush, and its north and north-eastern subtropical and tropical enclave, the description of new and strange species from such different environments is a necessary obligation in a faunistic survey of the territory.

The mydaid fauna is comparatively rare anywhere in southern Africa, if not in Africa, and the acquisition and descriptions of these various new forms from this part of the subcontinent, as a sort of addendum to my revision of the family, become necessary.

Up to date 12 species of Mydaidae have been described from South West Africa. These, listed more or less in taxonomic order and with the dates of description in brackets, are:

Eremohaplomydas desertorum Bequaert (1959)
Lachnocorynus kochi Hesse (1969)
Afroleptomydas pseudolanipes Bequaert (1963)
Afroleptomydas pulverulentus Hesse (1969)
Afroleptomydas pseudo-opacus Bequaert (1963)
Afroleptomydas (*Crossoprosopus*) *kaokoensis* Hesse (1969)

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Afroleptomydas (*Crossoprosopus*) *rudebecki* (Bequaert) (1959 and 1969)
Namadytes vansoni Hesse (1969)
Namadytes prozeskyi Hesse (1969)
Notosyllegomydas brincki (Bequaert) (1959 and 1969)
Nothomydas gariepinus Hesse (1969)
Cephalocerodes eremobius Hesse (1969)

In this paper 16 new species, including 3 new genera, are described. The total number of known species from the territory is now 28, divided among 10 genera.

More organized and intensive collecting in this vast territory is bound to increase this number of genera and species considerably in future.

Descriptions

Subfamily Syllegomydainae

Tribe Syllegomydaini

Genus AFROLEPTOMYDAS Bequaert

Afroleptomydas lindneri n.sp.

A single ♂ specimen, among the Mydaidae from South West Africa submitted by Professor E. Lindner of the Staatliches Museum für Naturkunde in Stuttgart, and labelled as 'Gen. nov. pr. ? Nomoneura Bezzi' is obviously a new species of *Afroleptomydas*, which I have the pleasure in naming for Professor Lindner. It has no relationship with *Nomoneura*, and is characterized as follows:

Body with the vertex of head on each side infused with dark reddish brown; antennae dark blackish brown, joint 1 also slightly infused reddish brown; proboscis black, its base more brownish; the following parts pale reddish brown: humeral tubercles, notopleural part, an abbreviated submedial streak on each side of mesonotum ending before middle, postalar calli to an obscure extent, anterior and posterior parts of mesopleuron, the pteropleuron, an infusion on metapleural parts, area below and behind halteres, sides of tergite 1, base laterally of 2 (the last three more yellowish), extreme sides of 2–5 to an obscure extent, apical parts of lobes of tergite 9, sternites 8 and 9, hypopygial structures (especially apical parts of processes of sternite 9, and the aedeagal apparatus); venter also mainly reddish brown, paler near base; hind margins of tergites 2–6 and very narrowly of 7 whitish, narrower across sides; bullae reddish brown; hind margins of sternites on extreme sides also pallid; legs mainly reddish brown, the femora darkened above.

Integument of central part of frons shining; that of antennae dull; proboscis mainly shining; thorax above dull; pleurae subshining, with microscopic areolar microsculpture; metanotum mainly dull, posteriorly subshining, also

with indications of fine areolar microsculpture; abdomen above and below more or less shining, more so towards apex, finely setiferously punctured, the genital parts, including sternite 8 duller, finely microscopically microsculptured; integument of legs also dull, with very fine areolar microsculpture.

Vestiture with the hairs on head moderately long and dense, snow white, those on each side just behind antennae and on clypeus the densest, directed downwards, those on upper part of frons laterally, on vertex and upper part of occiput directed more upwards, the occipital part fairly densely snow-white-haired all round, the upper occipital part also with distinct and conspicuous brownish postvertical spines; sides of frons and sides of occipital part behind eye-margins with dense white tomentum; hairs on the following parts snow white: humeral tubercles, dense ones along notopleural part, anteriorly on the two submedial mesonotal streaks, across base of mesonotum, the finer shorter and sparser ones on the submedial pale mesonotal streaks, very short and sparse ones along the central mesonotal streak, longish ones across hind part of mesopleuron, those on pteropleuron, metapleural part, on sides of metanotum, dense ones on sides of tergite 1, as well as less dense longish ones on tergite 1 discally, longish ones on sides in basal half of 2, much shorter and sparser ones on extreme sides of 3, fine and short ones on genital segments, sparse and longish ones medially on sternite 2, a tuft of longish hairs on each side of prosternum, shorter ones basally and anteriorly on front coxae, sparse ones laterally on middle coxae, sparse ones on metasternum, and a tuft of longish hairs laterally and basally on hind coxae; short decumbent hairs in setiferous punctures on tergites 2–5 dark or blackened, those discally and laterally on 6 and 7 gleaming more sericeous in certain lights; the short ones on extreme sides of tergites 4–7 paler, more sericeous yellowish; short backwardly-directed hairs in setiferous punctures on sides of venter also dark, those along middle appearing paler, and those on sternites 7 and 8 distinctly more sericeous yellowish; hairs on legs very short, seta-like, denser on femora above, sparser on sides and below, appearing dark in certain lights and silvery gleaming in others, those on tibiae even shorter, gleaming pale sericeous yellowish and whitish.

Head broader than thorax; eyes large, very convex; interocular space on vertex comparatively narrow, only a little less than a third width of head broader than space below head (as 16:11), the inner margins of eyes widest apart opposite antennae where the distance is wider than interocular space, the margins thus slightly converging to vertex and more so towards head below; vertex itself distinctly sunk in; clypeus only slightly prominent; proboscis (cf. Fig. 1, top left) about 2,48 mm long, the stem slightly broadened and compressed to labella in side view, the labellar lobes ploughshare- or hoof-shaped, sharply pointed apically, the heel-part rounded, striated transversely and covered with fine spinules, the rest of stem very sparsely spinulated; palps subequal in length to first antennal joint; antennae (cf. Fig. 1, top left) close together, long, nearly or quite as long as mesonotum plus scutellum, joint 1 thickened, subspindle-shaped, about twice length of joint 2, the latter a little

broader than long, with a crown of short blackish brown hairs, joint 3 rod-like, a little less than 4 times length of 1 and 2 combined, longer than club, not demarcately thickened apically, obscurely transversely and shallowly ringed, except in apical part, the club elongate, broadest at about middle, from there to base gradually narrowing and with only a slight neck-like base, apicalwards at first slightly constricted then again widening subapically, the apical sensory part sloping up conically to tubercle.

Wings relatively broad, not projecting beyond abdomen, infuscated smoky brownish in more than anterior half, more or less to end of second submarginal cell, to basal part of first posterior cell at level of apex of discoidal cell, to faintly along posterior vein of third posterior cell, to apical part of latter and posteriorly and across to apex of anal cell, being darkest in middle part of wings in greater parts of marginal, first submarginal and first basal cells and along veins in hinder half; greater part of first posterior cell, the apical part, broad hind border, broad axillary lobe and middle parts of anal, third posterior and discoidal cells being clearer; veins brownish; second submarginal cell with a well-developed appendix; first posterior cell much or sharply narrowed apically, shortly stalked on costal margin; discoidal cell shortly stalked apically; hind border of wings comparatively broad; axillary cell markedly broad, with distinct flattened cilia along hind margin at broadest part and minute ones from there to its apex; alula well developed, broad, lobe-like; halteres pale yellowish brown, but more than posterior half of broadened apical part black.

Legs moderately long; hind femora much thickened, subspindle-shaped, thickest a little beyond middle, armed below with a double row of strong, backwardly-directed, blackish brown spines on tubercles, beginning a little before middle, with about 7 in outer row and 7 in inner one (one of the hind femora in the specimen is damaged and tibiae of both missing); front and middle tibiae, apart from their apical spicules, with about 3–5 dark spicules along posterior lower aspect and a few much shorter ones along anterior upper part, the middle ones also with 3–5 longer ones along anterior ventral part; anterior tibiae below with a ventral streak of dense, brush-like, short hairs beginning near base and more evident in apical half; front and middle tarsi about, or a little less than, half length of corresponding tibiae; claws well developed, yellowish brown, darker at bent-down apices; pulvilli well developed.

Hypopygium (cf. Fig. 1, bottom left) with the lateral lobes of tergite 9 angularly pointed; sternite 9 roundly prominent posteriorly, slightly laterally compressed apically, its processes in side view gradually narrowed apically and the apices directed upwards, in dorsal view strap-like, slightly narrowed to blunt and rounded apex; aedeagal apparatus rather elongate, the anterior or dorsal epimere long, extending much beyond the two phallic tubes which are also comparatively long.

From the ♂ holotype in the Stuttgart Museum.

Length of body: about 14,5 mm

Length of wing: about 11,5 mm

Distribution

South West Africa: Guinas (? 29/9/54) (No regional locality is given and no collector's name). From the handwriting the collector probably was Herr F. Gaerdes of Okahandja.

This species is to be placed in the *westermanni*-section of *Afroleptomydas* in which the hind femora are distinctly thickened or incrassate and the wings in a number of ♂♂ are infuscated. Characters such as the presence of delimited bare streaks on mesonotum, white hairs on mesonotum, the short dark hairs on the abdomen above, the type of wing-infuscation, the apically-narrowed and stalked first posterior cell, the relatively dark legs, etc., however exclude it from any of the subsidiary sections of the *westermanni*-group of species.

CROSSOPROSOPUS Hesse subgenus of AFROLEPTOMYDAS

All the other species of *Afroleptomydas*, collected in South West Africa and submitted to me for identification and described in this paper, belong to the subgenus *Crossoprosopus*, defined by me in 1969. This subgenus is apparently well represented in the territory.

Afroleptomydas (*Crossoprosopus*) *angolensis* n.sp.

Three ♂♂ from Angola, collected by Dr Brown, though not from South West Africa, are described below because the locality from which they come is just north of the Kunene River and similar environmentally to that of north-western South West Africa in which this species might also occur. This new species is very near *tuliensis* Hesse from Rhodesia and is characterized as follows:

Body on the whole much darkened above, dark brown to blackish brown; antennal joints 1 and 2, about basal $\frac{2}{3}$ of joint 3, and greater part of club, except black base and sometimes the slightly darkened subapical part of latter, orange yellowish; clypeus yellowish; head below pale yellowish brown; proboscis black, pale yellowish brown below; humeral tubercles, sides of thorax above, postalar calli, medial basal part of mesonotum in front of scutellum, scutellum, sides of metanotum to a variable extent, pteropleural and metapleural parts in front of halteres to a variable extent, and hypopleural part pale yellowish brown; sides and also broad hind margin of tergite 1 also pale yellowish brown, the middle of the hind margin inclining to be more yellowish; abdomen brown to dark brown or even blackish brown; hind margins of tergites 2–7 ivory yellowish or yellowish white, becoming progressively narrower, the last 2 being much narrower than the very broad ones across tergites 2–4, the sides of tergites sometimes more yellowish brown or brown to a variable extent, especially on 2–5, contrasting with the darker discal dorsum which latter tends to appear darker, more patch-like basally dorsally; bullae rather large, bean-shaped, the broad anterior border mainly shining black, the median anterior discal part just behind the black anterior border tending to be orange brownish

to a variable extent, the space between bullae much broader than transverse length of bullae; venter either mainly dark or to a variable extent yellowish brown, especially on sternites 1–5 (or 6), the hind margins of sternites 1–6 however broadly whitish, especially on sides; genitalia mainly yellowish brown, sometimes dark reddish brown; legs yellowish brown to reddish brown, the femora above darker brownish, the bases of hind ones more yellowish, the knees and bases of tibiae also paler, more yellowish, more than basal halves of hind tibiae above, especially when viewed from behind, also more yellowish, only the apical part appearing darker, the front and middle coxae dark brownish, the hind ones paler, more yellowish, the tarsi more yellowish, the apices of the joints below darkened, and claw joint also blackish towards apex.

Integument of central raised part of frons, clypeus, and head below smooth and shining; that of thorax above dull, leathery; metanotum dull, leathery; greater part of pleurae dull, the outer part of anterior spiracle, and sutural parts, anterior part of pteropleuron, and sclerites below wing-bases however shining; abdomen above mainly dull, somewhat shining across extreme bases on sides of tergites 3–5, with fine, separated, not very dense, setiferous puncturation, slightly denser on sides of tergites 2 and 3 and absent from ring-like hind margins of tergites, those on 6 and 7 more 'nadelrissig'; venter also with separated setiferous puncturation, absent from broad transverse basal parts of sternites and from broadish shining hind margins, and also from extreme sides of sternites, the last two sternites with indications of transverse striae or rugae, especially on sides; legs mainly dull.

Vestiture not very long; that on vertex and head in front dense and white, shorter and less dense on occiput, with dense, greyish white tomentum on sides of frons and on occiput; hairs on thorax above mainly white, those discally sometimes with a slight sericeous yellowish tint, dense and longer on sides and medially basally in front of scutellum, the short decumbent ones on disc arranged in more or less 2 broadish submedial streaks and a narrow, linear, central one along the middle, all these longitudinal streaks, as well as hairy sides, separated by more or less bare streaks, the hairy streaks being on streaks of tomentum; hairs on metanotum also white, the integument of metanotum itself with slight greyish tomentum; pleurae with fine greyish, not very dense, tomentum, the posterior margin of mesopleuron, the pteropleuron, metapleural part in front of spiracle, and metasternal part with white hairs, not much longer than those on sides of thorax above; tergite 1 also with dense, longish, white hairs on sides; base of tergite 2 especially sides, with similar longish white hairs; extreme base laterally of tergite 3 also with some long white hairs; fine, short, backwardly-directed hairs in punctures on dorsum of abdomen gleaming slightly sericeous yellowish, the integument of tergites however covered with greyish white to faintly yellowish white tomentum; venter with some longish white hairs basally on sternite 2; the backwardly decumbent ones on greater part of venter slightly longer than short ones on dorsum and also with a slight sericeous yellowish tint; hairs on hypopygium not very dense, sericeous

white to faintly sericeous yellowish; hairs on legs comparatively short and not dense, mainly gleaming sericeous white, denser and longer on coxae, the femora below bare; spines on hind femora below and spicules on tibiae whitish, those on tarsi tending to be more faintly yellowish white to yellowish.

Head broader than thorax; vertex sunk in; interocular space on vertex about as wide as distance of central frontal ridge between vertex and base of antennae, wider than space below head; yellowish white postvertical spines present; clypeus convex; antennae longer than mesonotum, about 3,9–4,1 mm, joint 1 slightly thickened, about twice as long as 2; joint 3 elongate, about 3,5–3,7 times combined length of 1 and 2, longer than club, with a little less than its apical fourth thickened; club itself (excluding articulation between it and joint 3) distinctly shorter than joint 3, elongate pyriform, broadest at about apical fourth, beyond that sloping up or narrowing to the transverse crater-like terminal tubercle, the base of club constricted neck-like; proboscis about 2,8 mm long, only a little longer than vertical length of eye; palps small, but distinct.

Wings greyish hyaline, with a very faint indication of faint yellowish borders to the veins in apical part beyond apex of first basal cell; veins near base and costal vein yellowish, in rest of wings brown or dark brown; first posterior cell broadly open on costal vein; second submarginal cell with or without a short appendix at base; halteres yellowish white, the knobs infused with brown above to a variable extent.

Legs moderately long; hind femora thickened, spindle-shaped, with a double row of pallid spines (7–10 in both rows) on tubercles below, beginning a little distance away from base; front and middle tibiae slightly curved, without any distinct spicules (excepting apical spurs) on front ones, but with 2 rows of widely separated pallid spicules on middle tibiae; hind ones with granules below and with an outer row of pallid spicules on granules in apical half; basal joint of hind tarsi subequal to or only a little longer than claw-joint; pulvilli just falling short of apices of claws.

Hypopygium (cf. Fig. 2, top left) with the lobes of tergite 9 slightly angularly produced apically; sternite 9 conical, medially incised apically, its processes in side view slightly S-curved, in dorsal and ventral views hollowed, narrowed towards apex and bluntly pointed; aedeagal apparatus with the dorsal epimere longer than the phallic tubes.

From a ♂ holotype and 2 ♂ paratypes in the South African Museum.

Length of body: about 19–20,5 mm

Length of wing: about 12,5–14 mm

Distribution

Angola: Mocâmedes District: 42 km south of São Nicolau (H. D. Brown, 16/4/1971).

From the Rhodesian species *tuliensis* Hesse, nearest to it, it differs in being slightly larger, with comparatively longer, more slender abdomen, distinctly longer antennae, joint 3 and club being proportionally longer, longer labella

of proboscis, less dense, sparser and slightly shorter vestiture, relatively broader anal cell, its posterior vein more sinuous, distinctly longer slender part (side view) of processes of sternite 9, their apices blunter in dorsal view, and larger sternite 9.

Afroleptomydas (*Crossoprosopus*) *ovamboensis* n.sp.

A somewhat damaged rather small ♂ specimen from Ovamboland in the collections before me, and belonging to a new species, is characterized as follows:

Body mainly dark; head, including clypeus, black; proboscis very dark blackish brown; antennae dark yellowish brown, the first joint, thickened apical part of joint 3, base and apex of club darker, more black, the broad middle part of club orange yellowish; humeral tubercles yellow; thorax above, scutellum, pleurae and metanotum black; sclerites below wing-bases brownish yellow; abdomen mainly brownish, the dorsal discal basal parts of the tergites darker, more blackish brown, more so on tergites 1–6, the sides basally of tergites 1–3 distinctly more yellow and to a lesser extent also those of 4–7, the hind margins of 2–8 broadly pale yellowish white, those of 7 and 8 narrower, and that of tergite 1 the narrowest; venter more yellowish brown, the hind margins of sternites 1–7 also broadly pale yellowish white; bullae shining black, widely separated; hypopygium pale yellowish brown, the anal lobes more yellowish; legs mainly yellowish, the coxae dark or black, more or less apical half of hind femora darker above, more brown, and claw-joint of tarsi also more brown.

Integument of medial part of frons, clypeus, head below and proboscis shining; that of thorax above dull, leathery; scutellum subshining; metanotum dull, with indications of some transverse grooves on sides; pleurae mainly dull, the propleural part and sutural part of sternopleuron somewhat shining; abdomen discally on dark discal patches dull, the sides of basal segments and sides of rest of tergites up to 6 more or less shining, the tergites with setiferous puncturation and tending to be striated on sides towards hinder parts; processes of sternite 9 and aedeagus shining; venter shining, with sternites 7 and 8 somewhat transversely striate; legs subshining, with fine setiferous puncturation lodging the hairs, the outer bases of front and middle femora, and to a finer and lesser extent the tibiae transversely striate, the granulation on hind tibiae below rather feebly developed and not dense.

Vestiture fairly dense, but not very long, mainly snow or sericeous white; that on head in front dense, snow white; that on head below sparser; that on sides of thorax above, postalar calli, and basally in front of scutellum dense and snow white; the backwardly-decumbent, shorter ones on disc gleaming more sericeous yellowish, arranged more or less in streaks, a narrow central streak and 2 broader submedial ones, with a bare sublateral streak on each side which becomes entirely bare in hinder half; hairs on metanotum denser on sides; pleurae mainly bare, with fine greyish tomentum, with very sparse white

hairs across hind margin of mesopleuron, sparse on pteropleuron, and denser in front of halteres; abdomen with dense, longish, white hairs on tergites 1 and 2, especially on sides, some longish ones also on sides basally of 3 and 4, with the other short, decumbent hairs in fine punctures on tergites gleaming slightly sericeous yellowish in certain lights, sparser on tergite 7, also comparatively sparse on hypopygium; hairs on venter slightly longer than on dorsum, mainly white, longer on sternites 1–4; hairs on legs gleaming mainly sericeous white, not very long, except on coxae where they are also denser, those on front and middle femora above also longer and denser than on rest of legs, slightly sparser and shorter on hind femora above, the shorter ones on all the tibiae gleaming slightly more sericeous yellowish; spines on hind femora below and spicules on tibiae and tarsi pale yellowish white; tomentum on sides of head in front greyish white, rather narrowly confined along eye-margins, that on occiput also greyish white, more extensive; fine greyish tomentum on disc of thorax more or less confined to hair streaks; that on metanotum slightly denser than that on entire pleurae; the fine greyish tomentum on tergites 1–6 visible in certain lights, even on black basal discal patches on 3–6.

Head much broader than thorax; vertex sunk in; no distinct postvertical spines detectable; interocular space on vertex only a little broader than space on head below; antennae subequal in length to mesonotum plus scutellum, joint 1 only slightly thickened, about $2\frac{1}{3}$ times length of 2, and with only a few hairs, joint 3 nearly or about 3 times length of 1 and 2 combined, thickened in a little less than apical $\frac{1}{3}$, the club elongate pyriform, slightly longer than joint 3, narrowed neck-like at base, broadest at about or at a little less than apical $\frac{1}{3}$, its apical sensory area more rapidly narrowed on inner than outer part to crater-like prominence; proboscis short, only a little longer than club of antennae, very much shorter than vertical length of eyes, only about 1,24 mm long; palps small, but distinct, with yellowish hairs apically; buccal cavity below projecting rather prominently ledge-like.

Wings comparatively short, clear hyaline, with a faint whitish tint in certain lights; veins mainly yellowish, becoming more yellowish brown in apical and hinder parts of wings; first posterior cell narrowly opening (or sessile) on costal margin; second submarginal cell with a short appendix; discoidal cell stalked apically; halteres whitish.

Legs with the front and middle femora unarmed below; hind femora moderately thickened, spindle-shaped, armed below with a double row of spines on tubercles, about 8 in outer row and 9 in inner one, the latter beginning before the outer one from near base; front and middle tibiae slightly curved, the pale spicules on middle ones more developed, longer; hind tibiae with distinct spicules on granules, only present along a little more than outer apical third, the rest in the row minute or small, the granules below the hind tibiae on the whole poorly developed; basal joint of hind tarsi subequal in length to claw-joint.

Hypopygium (cf. Fig. 2 top middle) with the lateral lobes of tergite 9 rather

angularly pointed; sternite 9 bluntly rounded apically, medially dorsally and apically with the usual incision, the dorsal processes of the sternite rather long, in side view rather slender, slightly upcurved, in dorsal view slightly curved outwards in apical part and sharply pointed apically; aedeagal apparatus with the central and dorsal shoe-horn-shaped epimere rather long, projecting much beyond the two phallic tubes.

From a single ♂ holotype in the South African Museum.

Length of body: about 13,5 mm

Length of wing: about 8 mm

Distribution

South West Africa: Ovamboland: 35 km north-west of Oshakati (H. D. Brown, 21/4/1970).

Superficially this species resembles the ♂ of *vansoni* Hesse in the nature of the vestiture, short proboscis and yellow legs, but differs in its entirely dark clypeus, longer and less thickened antennal clubs, more slender legs, a first posterior cell which opens more narrowly on costal margin, comparatively longer processes of sternite 9, and distinctly longer epimere of aedeagal apparatus.

From ♂♂ of certain forms or varieties of *mauricei* Beq. it may at once be distinguished by its longer hairs, denser hairs on head in front, slightly longer hairs on rest of body and legs, comparatively much shorter antennae, very much shorter proboscis, darker clypeus, paler legs, comparatively longer and more slender processes of sternite 9, and comparatively longer and more slender epimere.

Afroleptomydas* (*Crossoprosopus*) *nigrescens n.sp.

An almost entirely black-bodied ♂ and a ♀, which I take to be the same species, in the collections from South West Africa before me, represents a new species which is near *mauricei* Beq.

The ♂ specimen is chacterized as follows:

Body almost entirely dark blackish brown to black; clypeus reddish brown; antennae brown, joints 1 and 2 dark blackish brown, greater part of clubs, excepting brownish, neck-like, basal part and apical sensory area, orange yellow; proboscis reddish brown, its labella slightly darker; humeral tubercles pale yellowish and area around them more reddish brown; rest of thorax, excepting dark brownish postalar calli and sclerites below wing-bases, entirely dark; abdomen very dark blackish brown to black, the lateral part of tergite 1 reddish brown and its hind margin more dark reddish; broad, ring-like hind margins of tergites 2–8 ivory whitish (those of 6–8 narrower); hind margins of sternites 2–5 also broadly ivory whitish, that of sternite 6 much narrower and those of 7 and 8 very narrow and scarcely differently coloured from the dark colour of those sternites; apical part of lateral lobes of tergite 9, apical part of sternite 9, processes of latter, and aedeagal apparatus slightly paler reddish

brown; legs with the coxae dark, the base of middle ones yellowish brown, the membranous articulations between front and hind coxae and their respective sternal parts more yellowish, the legs themselves brownish, the hind femora in more than apical half laterally and below darkened blackish brown, and front and middle ones along outer or hinder aspect also darkened; all the tibiae appearing paler yellowish brown, the last 3 joints of front and middle tarsi, and last 2 of hind tarsi tending to be dark blackish brown, and apical curved part of claws black.

Integument of head in front, first and second antennal joints, proboscis, and rest of body mainly shining; propleural and prosternal parts, hinder half of mesopleuron, the pteropleuron, metapleural part however dulled by greyish white tomentum; a narrow central streak, a broader submedial streak on each side of mesonotum, a lateral notopleural streak, and a medial patch in front of scutellum also dulled by greyish tomentum; abdomen with tergite 1 markedly transversely convex, the rest with saddle-shaped dull patches discally above on more than basal halves of tergites 2–6, appearing dull black in certain lights, but covered with fine greyish white tomentum in other lights; integument of tergites with comparatively widely-spaced setiferous puncturation lodging the hairs, denser on tergites 1 and 2; sides of tergites 2–7 also showing indications of transverse striation in certain lights; bullae large, bean-shaped, shining black, separated by a space slightly narrower than transverse length of a bulla, their anterior margin marked off as a transverse row of coarse punctures, and anterior part of the disc of the bullae behind the anterior ridge with a row of pit-like punctures; legs subshining, with fine, slightly raised, setiferous puncturation lodging the hairs, the femora, especially hind ones and near the apex, with indications of transverse striae, and the tibiae too, especially hind ones, with indications of transverse striation.

Vestiture mainly snow white or silvery white, not very long, the longest and densest hairs in tufts on head in front, on vertex, upper occipital region, on humeral tubercles, sides of thorax above, in a patch in front of scutellum, on metanotum, especially sides, as sparse ones across hind margin of mesopleuron, and slightly denser ones on pteropleuron and metapleuron; hairs on sides of tergites 1 and 2 also long and dense, and also with a few sparse longish ones basally on sides of 3; hairs on disc of mesonotum arranged in the usual narrow central streak and 2 broader submedial ones, these hairs short and backwardly-decumbent and, excepting the longer white ones anteriorly, with a very faint sericeous yellowish tint; short decumbent hairs on abdomen above rather widely spaced, slightly denser discally on tergite 2 and to a lesser extent on 3, all with a very slight sericeous yellowish tint; hairs on venter more or less confined to middle part of sternites 2–6, also widely spaced and slightly gleaming sericeous yellowish, but slightly longer than on dorsum; hairs on sternites 7 and 8 like those dorsally; hairs on hypopygium equally widely spaced and also tinted sericeous yellowish; hairs on coxae dense and silvery white, those on front and middle femora above and behind dull white, longer and denser than

those on hind femora, and those on tibiae short, dense and gleaming very slightly sericeous yellowish; tomentum behind eyes greyish white, that on thorax and abdomen as stated above, but that on tergites 6,7 and sides of 8 not confined to saddle-shaped discal patches, but also faintly evident laterally; tomentum on hypopygial parts also faintly indicated.

Head much broader than thorax; interocular space on vertex subequal in width to the interocular space on head below, the inner margins of eyes converging above and below; some distinct postvertical spines detectable; clypeus comparatively short centrally, tending to be slightly longitudinally convex; proboscis comparatively long, about 2,8 mm long fully extended, much longer than vertical length of eyes; palps distinct, slender; antennae comparatively long, much longer than mesonotum, with joint 1 not much thickened, about $2\frac{1}{4}$ times length of 2, joint 3 the longest, slightly more than 3 times length of 1 and 2 combined, a little less than its apical $\frac{1}{3}$ slightly thickened; clubs elongate pyriform, shorter than joint 3, broadest at about apical third, their bases (a little less than basal $\frac{1}{4}$) markedly and sharply demarcated neck-like, with the conical apical sensory area also sharply demarcated by an almost encircling ridge, interrupted dorsally or laterodorsally where club passes apically into the vertical, slightly elongated, crater-like, apical prominence.

Wings greyish hyaline, with a very faint whitish tint in certain lights; veins yellowish brown; second submarginal cell with a short appendix; first posterior cell broadly opening on costal margin; hind border of wings much narrower than either first and third posterior cells; halteres pallid, the knobs darkened above.

Legs with the front and middle femora unarmed below; hind femora markedly thickened, subspindle-shaped, armed below with a double row of pallid spines on tubercles, about 5–7 in the inner row and 6 in the outer one which begins a little before the inner one; front and middle tibiae slightly curved, the spicules on front ones shorter than those on middle ones; hind tibiae also slightly curved beyond middle, the granules below distinct, those in outer row below with stoutish spine-like spicules in apical half, the rest of spicules on hind tibiae finer and shorter; basal joint of hind tarsi subequal to claw-joint.

Hypopygium (cf. Fig. 2, top right) with the lateral lobes of tergite 9 slightly produced apically; sternite 9 conical, slightly grooved obliquely on sides basally, its process on each side, in side view, not very long, slightly sinuous, the apex, in dorsal view, sharply pointed; aedeagal apparatus with the dorsal shoe-horn-shaped epimere rather narrow and much longer, quite 2 times, length of phallic tubes.

The ♀ specimen which I take to be the ♀ of this species is characterized as follows:

Body also mainly very dark blackish brown, the apical part of abdomen becoming more dark reddish brown; clypeus also reddish brown; antennae coloured as in ♂; proboscis however darker above; thorax with the humeral

tubercles also pale yellowish as in ♂, the area around them, especially anteriorly on inner side of tubercles, the sides of thorax, postalar calli, base of mesonotum, and scutellum however also yellowish; metanotum dark reddish brown anterolaterally, its central part black; pleurae as in ♂; abdomen with tergite 1 also markedly inflated and convex as in ♂, the sides of this tergite and its broad hind margin reddish brown; the very broad, ring-like, hind margins of tergites 2–6 ivory yellow, and a broad, discal spot occupying apical half of tergite 7 and extending on each side narrowly and obliquely towards hind margin also ivory yellowish; bullae shining black; venter also with broad ivory yellow hind margins across sternites 2–6, but 7 and 8 however without yellow hind margins; coxae more dark reddish brown than black; legs coloured as in ♂.

Integument of head and thorax as in ♂; abdomen however mainly smooth and shining, polished in appearance, with widely-spaced, fine, setiferous puncturation lodging the forwardly-directed hairs only on tergites 6–8 and with fine, scarcely detectable, setiferous puncturation on disc of tergite 2 and base of 3; venter mainly smooth and shining, with widely-spaced, fine puncturation only on sternites 7 and 8; tergites and sternites 7 and 8 also with transverse striation; integument of legs as in ♂.

Vestiture also mainly snow white; that on head, thorax, basal part of abdomen, and coxae similar to that of ♂, only slightly shorter; that on sides of tergites 1 and 2, metasternum and hind coxae also slightly shorter; fine and short, separated hairs on tergites 2 and 3 gleaming slightly sericeous yellowish in certain lights; middle parts of abdomen above mainly smooth; fine reversed hairs on tergite 6 and longer stiffer ones on 7 and 8, and bristly ones on genitalia, brown; sternite 2 with some separated whitish hairs; hairs on legs only a little shorter than in ♂; tomentum on head and thorax as in ♂, but without any tomentum on the smooth abdomen.

Head as in ♂, with the interocular space on vertex subequal in width to space below head; vertex not very deeply sunk in; postvertical spines more distinct; antennae as in ♂, the joints similar, with the same proportions; proboscis as long (about 2,8 mm) as in ♂, though slightly thicker and more darkened above; palps also slender, but with more dark hairs.

Wings differ from those of ♂ in being faintly infuscated brownish, and with indications of faint fuscous borders to basal cross vein and basal veins of first posterior cell and vein between it and second submarginal cell; latter with a longer appendix; first posterior cell however less widely opening on costal margin; hind border of wings in apical half less narrower than posterior cells than in ♂; halteres similarly shaped.

Legs very similar, but hind femora less thickened, armed below with a few more spines (7–8 in inner row and 7–9 in outer one); spicules on tibiae longer than in ♂; claws of tarsi shorter, more sickle-shaped, not so hook-shaped; pulvilli smaller.

Genital segments with 7 narrow yellowish brown spines on each acanthophorite of tergite 9; anal lobes prominent, pincushion-like on each side, with

projecting bristly hairs.

From a ♂ holotype and ♀ allotype in the South African Museum.

Length of body: about 16,5 mm

Length of wing: about 11–12 mm

Distribution

South West Africa: Kaokoveld: Orupembe (H. D. Brown, 1/5/70) (♂ holotype); 21 km south of Orupembe (H. D. Brown, 1/5/70) (♀ allotype).

This species is very near some dark forms of *mauricei* Beq. The ♂ may at once be distinguished by the much darker or black abdomen and venter, the longer antennae, distinctly very much longer third antennal joint, on the whole slightly longer proboscis, a first posterior cell in wings which opens more broadly on costal margin, more inflated or convex tergite 1, more widely-spaced setiferous puncturation (hairs) on abdomen, and distinctly much longer and relatively narrower epimere.

The ♀ may also be distinguished from that of *mauricei* by the antennal characters, the longer and denser hairs on thorax, pleurae, metanotum, and base of abdomen, the very broad yellow spot on apical half of tergite 7, the slightly less infuscated wings, and the less hairy legs.

Afroleptomydas (***Crossoprosopus***) ***cognatus*** n.sp.

Another dark-bodied ♂ from the same geographical region in South West Africa is so closely related specifically to the ♂ of *nigrescens* that it may almost be considered as a subspecies of the latter. This ♂ specimen however agrees and differs from the ♂ of *nigrescens* in the following respects:

Body longer, distinctly more robust, with more robust thorax and first and second abdominal segments, with tergite 1 however also markedly inflated and convex; abdomen distinctly stouter; body also mainly black; antennae with joints 1, 2 and 3 entirely black (not with 3 brown as in *nigrescens*); clypeus very dark blackish brown, not reddish brown; proboscis more darkened above; thorax with the humeral tubercles and postalar calli similarly coloured; abdomen including venter also mainly black, with the hind margin of tergite 1 also dark reddish brown, and ring-like hind margins of rest of tergites also broadly ivory white; bullae also black, but much longer in vertical length and longer than the interocular space; venter and hind margins of sternites similarly coloured; legs with the front and middle femora darker posterolaterally and below, the hind ones more extensively blackened on sides and apically above than in *nigrescens*, and hind tibiae also more darkened along outer part towards apex.

Integument also mainly shining, the mesonotum with coarse 'nadelrissig', setiferous puncturation; abdomen with similar dull, discal, saddle-shaped patches on tergites 2–6, but with distinctly coarser, more 'nadelrissig', comparatively less widely-spaced, setiferous puncturation on tergites; integument of legs subshining, slightly more transversely striate.

Vestiture distinctly longer and denser, but also mainly snow white, distinctly longer and denser on pleurae, sides of tergites 1 and 2, with more long hairs on sides basally of tergites 3 and 4; the hairs discally on mesonotum not arranged in such well-defined streaks, more or less only as a broad central streak; the shorter, more sericeous-gleaming, decumbent hairs on abdomen above distinctly much longer than in *nigrescens* and also less widely spaced, those discally on tergite 2 and basally on 3 distinctly very much denser; hairs on venter also longer and denser; those on legs very similar, but hind femora with longish white hairs on nearly basal half above; tomentum present on same parts as in *nigrescens*.

Head with the vertex distinctly more markedly sunk in, with no distinct postvertical spines detectable; antennae distinctly much stouter (the clubs missing in specimen), with joint 1 slightly more thickened, but also about $2\frac{1}{4}$ times length of 2, with joint 3 more thickened, stouter, very much shorter than in *nigrescens*; proboscis much stouter, slightly longer, about 3 mm.

Wings also greyish hyaline, comparatively broader, the hind border scarcely or not markedly narrower than first and third posterior cells; second submarginal cell with a long appendix; first posterior cell more narrowed apically, more narrowly opening on costal margin; discoidal cell in this specimen not stalked apically; halteres gradually broadened to knob on inner side as in *nigrescens*.

Legs comparatively longer than in *nigrescens*; front and middle femora also unarmed below, the hind ones slightly more thickened, armed below with the usual double row of spines, but with more numerous, shorter and stouter ones (8 along inner row and 9 in outer one), beginning much nearer base; basitarsus of hind legs longer than, not subequal to, claw-joint.

Hypopygium (cf. Fig. 2, bottom left) differs from that of *nigrescens* in having the processes of sternite 9, in side view, less sinuous, slightly longer, appearing more slender, in dorsal view less rapidly narrowed to apex, the latter more broadly rounded and with 2 distinct punctures; aedeagal apparatus with the epimere comparatively shorter and, in ventral view, more rapidly broadened to apex.

From the single ♂ holotype in the South African Museum.

Length of body: about 17,5 mm

Length of wing: about 13,5 mm

Distribution

South West Africa: Kaokoveld: 21 km south of Orupembe (H. D. Brown, 1/5/70).

From *damarensis* n.sp., described further on, which it also resembles, this species differs in being much larger, more robustly built, with longer and broader wings, longer first antennal joints, much shorter third antennal joints, much longer proboscis, stouter, more bluntly rounded sternite 9 of which the processes (cf. Fig. 2, bottom left and Fig. 1, bottom right), in side view, are

comparatively longer, more slender and, in dorsal view, do not diverge slightly outwards.

Afroleptomydas (*Crossoprosopus*) *aridicolus* n.sp.

Still another almost entirely black-bodied ♂ specimen from the Namib Desert in the collections before me constitutes another new species which closely resembles both *nigrescens* and *cognatus*, but more so the latter. Unfortunately the antennae of this specimen are missing. It agrees with and differs from the two species mentioned in the following respects:

Body tending to be more robustly built than in *nigrescens*, more like that of *cognatus*, the abdomen as stout as in the latter; body also mainly very dark blackish brown to black; clypeus very dark blackish brown as in *cognatus*; proboscis very dark reddish brown as in the latter species; humeral tubercles yellowish as in both *nigrescens* and *cognatus*, but the area immediately around them black, not yellowish brown or reddish brown; postalar calli slightly darker reddish brown; sclerites below wing-bases also dark reddish brown as in *cognatus*; sides of tergite 1 very dark, not yellowish brownish or reddish brown as in the other two species; abdomen with the hind margin of the distinctly less inflated tergite 1 dark, the hind margins of tergites 2–8 also broadly ring-like ivory yellowish, also becoming narrower posteriorly from tergite 5; bullae blackish red, black in the other two species, their vertical length sub-equal to interocular space on vertex, longer than in *nigrescens*, but shorter than in *cognatus*, fairly widely separated; venter yellowish brown in at least basal half, darker in the other species, the hind margins of sternites 2–6 broadly ivory whitish, but 7 very narrowly so, as in *cognatus*; apical parts of tergite 9, anal lobes, processes of sternite 9 and aedeagus yellowish brown; legs more yellowish than in the other two species, the upper and outer surfaces of the front and middle femora appearing darker, more brownish, the hind femora with more than apical half dark brown and the basal part contrastingly yellowish, more conspicuously delimited than in the other two species (in *cognatus* almost entire outer face is dark brown); all the tibiae paler yellowish, the hind ones not darkened or darkened towards apex; last tarsal joint also darkened.

Integument with the same parts shining as in the other two species; dorsum of mesonotum however appearing duller; that of pleurae very similar; abdomen with the same saddle-shaped, dull, discal, basal patches on tergites, but slightly more extensive, leaving less of the sides shining, these patches also covered with greyish to greyish yellow tomentum, visible in certain lights, the dorsum of abdomen also with setiferous puncturation, distinctly less widely separated than in *nigrescens*, more like that of *cognatus*, but slightly less coarse and with shorter hairs; venter also shining, finely setiferously punctured, though less dense than in *cognatus* and less coarsely transversely striated in apical half; integument of legs as dull as in *cognatus* and also with indications of transverse striation.

Vestiture very similar to that of the two other species, also mainly snow

white, though distinctly longer and denser than in *nigrescens*, but distinctly shorter than in *cognatus*, more of the clypeus dorsally covered with hairs which are slightly longer than in *cognatus*, the tufts on vertex tinted slightly more yellowish in certain lights; hairs on mesonotum not so distinctly and demarcately present as distinct streaks as in *nigrescens*, more like those of *cognatus*, the broad medial streak however broader than in the latter, leaving narrower, more or less hairless streaks on sides discally; these decumbent hairs also gleaming sericeous yellowish; hairs on pleurae present on the same sites, but longer and denser than in *nigrescens*, more like those of *cognatus*; long and dense white hairs on sides of tergites 1, 2 and 3 and 4 as in *cognatus*, but slightly shorter; decumbent ones on tergites longer and less widely separated than in *nigrescens*, but distinctly shorter than in *cognatus*, also gleaming slightly sericeous yellowish; hairs on venter distinctly shorter and slightly less dense than in *cognatus*; hairs on coxae as in the latter, but comparatively shorter; hairs on legs with those on front and middle femora also long and dense, but slightly shorter than in *cognatus*, those on hind femora however distinctly less dense and shorter than in either of the other two species.

Head with the vertex less deeply sunk in than in *cognatus*, but slightly more so than in *nigrescens*; interocular space on vertex also subequal to space on head below; postvertical spines, as in *cognatus*, not detectable; antennae with joint 3 and club missing in specimen, but joint 1 slightly thickened, quite $2\frac{1}{4}$ times length of 2; proboscis about 2,7 mm long, distinctly shorter than that of *cognatus*, longer than vertical length of eyes, its labella shorter and more rounded apically than in the other two species; palps also slender.

Wings very faintly yellowish hyaline; veins yellowish, not brownish as in *cognatus*; second submarginal cell with an appendix; first posterior cell narrowed apically, even more so than in *cognatus*, narrowly opening on costal margin; discoidal cell shortly stalked as in *nigrescens*; halteres pale yellowish white, the knobs darkened above.

Legs slightly longer than in *nigrescens*, more like those of *cognatus*; front femora armed below along inner aspect with a row of distinct, short, spine-like bristly hairs, not detectable in the other two species; hind femora thickened, subspindle-shaped, armed below with an inner row of 10–11 and an outer row of about 9 whitish spines, beginning near base, thus with 2 or 3 more spines in outer row than in *cognatus*; spicules on tibiae longer, as long as or longer than width of tibiae, shorter than this width in the other two species; basitarsus of hind legs longer than claw-joint.

Hypopygium (cf. Fig. 2, bottom middle) with the lateral lobes of tergite 9 slightly angularly produced; sternite 9 conical, bluntly rounded apically, obliquely grooved basally on each side and then continued longitudinally, its dorsal processes projecting much beyond apex of sternite, in side view long and slender, only slightly curving upwards near apex, in dorsal view grooved above along inner aspect, slightly bent outwards near apex, the latter relatively bluntly pointed; aedeagal apparatus with the shoe-horn-shaped epimere

relatively shorter than in the other two species, about 1,6 times length of phallic tubes (in *nigrescens* and *cognatus* it is quite twice length of the tubes).

From the single ♂ holotype in the South African Museum.

Length of body: about 17,5 mm

Length of wing: about 12,5 mm

Distribution

South West Africa: Arechadamab, east of Swakopmund in the Namib Desert (H. D. Brown, 11/5/1959).

Afroleptomydas (*Crossoprosopus*) *damarensis* n.sp.

Another black-bodied ♂ specimen from South West Africa in the collections of the Stuttgart Museum and submitted by Professor Lindner is apparently a new species resembling *mauricei* Beq. from the Kalahari in Botswana, and also resembles *nigrescens* n.sp. It has two identification labels 'Gen. nov. pr. ? Mydaselpis Bezzi' and '? rufithorax Wied. det. H. Oldroyd, 1957' pinned under the locality label. It is however not related to either the genus *Mydaselpis* or to the Cape species *Afroleptomydas rufithorax*.

When compared with ♂♂ of the variable species *mauricei*, especially the darker forms, it agrees and differs from the latter in the following respects:

Body almost entirely black; proboscis entirely black, not infused with reddish brown or reddish below; clypeus much darker; antennal joints 1 and 2 dark blackish brown, not so yellowish as in *mauricei*, the broad middle part of clubs however also orange yellowish; humeral tubercles, which are comparatively smaller, also yellowish; rest of thorax, excepting obscure reddish brown postalar calli and yellowish brown sclerites below wing-bases, entirely black; abdomen mainly black, without any yellowish or brownish as in *mauricei*, the extreme sides of tergite 1 also black, but hind margin of tergite 1 however also reddish brown; bullae black anteriorly and reddish posteriorly (entirely black in *mauricei*), smooth, without any punctures; ivory yellowish hind margins of tergites 2–7 broader, more broadened on extreme sides, and with those of 6 and 7 broader than in *mauricei*; hind margins of sternites very broadly and conspicuously ivory yellowish, even those of 6 and 7 comparatively broad; lobes of tergite 9, sternite 9, and processes of latter yellowish brown; legs mainly very pale yellowish brown, the front and middle femora not darkened above or below, the hind ones conspicuously black above in apical half, the black patch-like and well marked off, not merely infused to a variable extent as in *mauricei* and other species, with the hind tibiae darkened apically and the claw-joints of all the tarsi darkened.

Integument very similar to that of *mauricei* and related species of the subgenus *Crossoprosopus*.

Vestiture very similar to that of *mauricei* and equally long, also mainly white, the longish hairs on head, mesonotum, pleurae, and abdomen basally however appearing to be slightly more dirty whitish than snow whitish (the

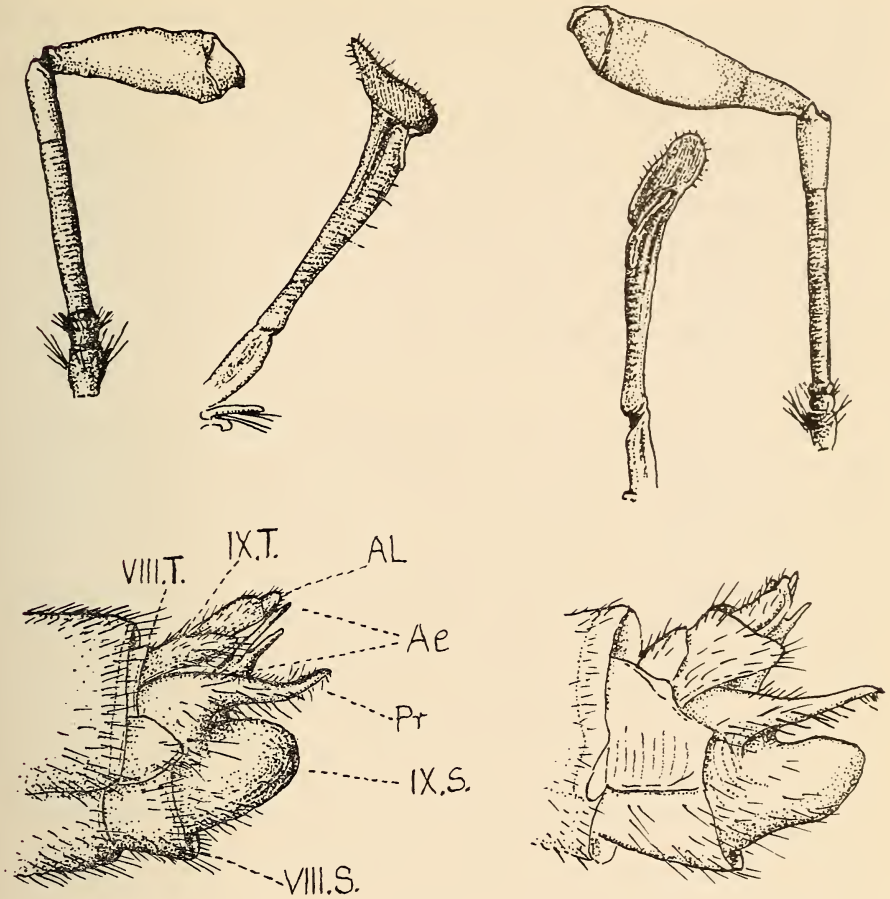

Fig. 1.

Left: Dorsal view of right antenna, proboscis, and below, left view of hypopygium of ♂ *Afroleptomydas lindneri* n.sp.

Right: Proboscis, side view of left antenna, and below left view of hypopygium of ♂ *Afroleptomydas* (*Crossoprosopus*) *damarensis* n.sp.

(Ae = aedeagus; AL = anal lobes; IX.S. = sternite 9; IX.T. = tergite 9; Pr. = left process of sternite 9; VIII.S. = sternite 8; VIII.T. = tergite 8.)

specimen however appears to be slightly greasy); hairs on mesonotum similarly disposed in streaks; those on sides of tergite 4 also long as on sides of preceding tergites, not shorter than on sides of 3 as in *mauricei*; longish hairs on venter also present on sternite 4; fine, decumbent hairs in fine setiferous punctures on rest of abdomen above appearing slightly more sparsely disposed than in *mauricei*; greyish white tomentum on head, thorax above, metanotum, pleurae and on abdomen above similar to that of *mauricei* and most other species of the subgenus; that on abdomen above in this somewhat greasy specimen however appears dark in part; hairs on legs as in *mauricei*, long, dense and white on coxae,

slightly long and dense on upper and outer faces of front and middle femora, and comparatively sparse and short on hind ones.

Head with the antennae (cf. Fig. 1, top right) comparatively longer than in *mauricei*, distinctly much longer than mesonotum; joint 1 proportionally shorter than in latter, less slender and only about twice length of 2; joint 3 proportionally longer, with a slightly longer apical thickened part, the club also elongate amphoriform, broadest beyond middle, its apical sensory area distinctly more conical all round, not sunk in on inner lower part, the apical crater-like tubercle distinctly more rounded, not so transverse as in *mauricei*; proboscis (cf. Fig. 1, top right) proportionally much shorter, only about 1,8 mm long and subequal in length to third antennal joint, its labella proportionally short, apically bluntly rounded (not sharply pointed), and with slightly fewer striae.

Wings, in proportion to body-length, relatively shorter than in *mauricei*, more glassy hyaline, without any distinct indication of a faint yellowish tint; veins pale yellowish brown; first posterior cell slightly narrowed apically, subtending angularly on costal margin; halteres like those of *mauricei*.

Legs proportionally distinctly shorter than in *mauricei*; hind femora similarly thickened, but more subspindle-shaped, the thinner basal part being proportionally shorter, armed below with the usual double row of pallid spines on tubercles which are however closer together, due to the shorter femora, but also with about 9 spines in both inner and outer rows; hind tibiae as granular below; spicules on tibiae and tarsi as in *mauricei*.

Hypopygium (cf. Fig. 1, bottom right) similar to that of *mauricei*, but sternite 9 more conically produced, its apex not so bluntly rounded and itself apparently longer, its processes, in side view, distinctly less sinuously S-curved, straighter, its apex scarcely or not bent downwards, in ventral view, the apex is more curved outwards; epimere of aedeagal complex comparatively and proportionally shorter relative to phallic tubes.

From the single ♂ holotype in the Stuttgart Museum.

Length of body: about 15,5 mm

Length of wing: about 9,5 mm

Distribution

South West Africa: Khomashochland (17/5/1953). No collector's name appears on the locality label, but the handwriting is that of Herr F. Gaerdes of Okahandja.

From the ♂ of *nigrescens*, which is also mainly dark-bodied and with dark abdomen, it may be distinguished by the entirely dark and much shorter proboscis, shorter and rounded labella, absence of yellowish brown on extreme sides of tergite 1, half reddish bullae, comparatively shorter wings, hind femora which have a contrasting, patch-like, black infusion above, denser hairs on abdomen above, and relatively shorter epimere in the aedeagal apparatus.

Afroleptomydas* (*Crossoprosopus*) *aquilus n.sp.

A somewhat damaged, markedly bare ♀ specimen from Damaraland in the collections before me cannot be allocated to any of the known ♂♂ from South West Africa. Superficially it resembles some ♀ forms of *mauricei*, but is entirely distinct. It is characterized as follows:

Body mainly very dark blackish brown to black; clypeus very dark, dark blackish brown; proboscis dark reddish brown, more black above and on labellar part; antennal joints 1 and 2 dark reddish brown, joint 3, almost basal half of clubs and apical tubercle part of latter very dark blackish brown or almost black, the greater middle part of clubs however orange yellowish; humeral tubercles yellowish; extreme sides of mesonotum very obscurely reddish brownish in certain lights, the postalar calli more yellowish, and extreme base of mesonotum reddish brown; scutellum black; metanotum black, its extreme base behind scutellum and two submedial streaks obscurely yellowish brown; pleurae very dark blackish brown to black; sclerites below wing-bases and sutural parts of pteropleuron yellowish brown, and the sclerite below halteres yellowish; extreme sides of tergite 1 also yellowish; abdomen with transverse depressed hind margin of tergite 1 reddish brown, the broad hind margins of tergites 2–7 yellowish, those of 6 and 7 broad discally, that of 7 even extending basalwards to more than half of the tergite, and tergite 8 mainly reddish brown discally, becoming paler apically; bullae comparatively small, black, but orange yellowish across hind margin, not punctured, very widely separated; venter dark or black, its base yellowish and hind margins of sternites 2–7 broadly yellowish, the last one the narrowest; legs mainly pale yellowish, the front and middle coxae, basal halves externally of hind ones dark, very dark blackish brown, and an inner subapical infusion and also an outer more obscure or fainter apical one on hind femora dark brownish.

Integument of head in front, greater part of sides of propleuron, the mesopleuron, sternopleuron, part of hypopleuron behind and below halteres, and to a large extent abdomen above and below shining; rest of pleurae slightly duller, covered with fine greyish bloom or tomentum; mesonotum duller, more subshining, more leathery, covered with fine separated, setiferous punctures, more or less in streaks; scutellum and metanotum dull, leathery; tergites 1 and 2 discally subshining, covered with fine, separated, setiferous punctures, denser on sides; rest of tergites with comparatively sparse, fine, setiferous punctures discally, their sides transversely striate, becoming coarser on sides of 5–7; tergites 7 and 8, especially latter, more coarsely striate or grooved, even discally; integument of venter mainly smooth, shining, more transversely striate on last three sternites; legs subshining, the femora transversely striate, the hind tibiae more evidently so below.

Vestiture very poorly and sparsely developed, markedly short; that on head in front relatively short and sparse, snow white, comparatively shorter than in other mainly bare species; that on sides of clypeus short, not extending across genal furrows; those on head below sparse; hairs on occiput also sparse

and white, with whitish postvertical spines on each side; sides of occiput with comparatively sparse greyish white tomentum; hairs on thorax above very short, decumbent, slightly sericeous yellowish in certain lights, more or less arranged in streaks; those on sides of mesonotum also relatively short, not as long as in some other species; metanotum with very short, sparse, yellowish hairs discally; posterior margin of mesopleuron with scarcely detectable, short, yellowish gleaming hairs; propleural knob however with sparse, longish, white hairs; rest of pleural sclerites without any detectable, short hairs, only with fine, rather sparse, greyish bloom or tomentum; discal part of tergite 1 with markedly short, sparse, yellowish or golden gleaming hairs, even shorter, sparser, scarcely detectable on sides of the tergite; tergite 2 with similar, very short, yellowish or golden gleaming hairs, slightly denser and shorter on sides; tergite 3 with even sparser, short, yellowish gleaming hairs; tergites 4 and 5 with very short, very sparse, widely-separated, golden gleaming hairs mainly discally; tergite 6 with sparse, forwardly-directed, very short, brownish hairs; tergites 7 and 8 with longer, widely-spaced, forwardly-directed, brownish hairs, slightly longer and denser on 8; venter mainly smooth and hairless, only last sternite with some forwardly-directed, sparse hairs on sides; hairs on legs markedly short and comparatively widely spaced, gleaming sericeous yellowish or golden, even the denser ones on front and middle femora also very short.

Head with the vertex somewhat sunk in; the interocular space on vertex slightly broader than on head below; antennae about subequal in length to mesonotum, with joint 1 only slightly thickened, about $2\frac{1}{3}$ times length of the rather short transverse joint 2, joint 3 slightly longer than club, a little more than its apical $\frac{1}{3}$ thickened, the clubs elongate pyriform, broadest beyond middle across a little more than apical $\frac{1}{3}$, their bases constricted neck-like, the apical sensory area more rapidly narrowed below, the rim below of crater-like terminal prominence rather prominently projecting; proboscis about 2,4 mm long, longer than vertical length of eyes, its labella broad, obtusely pointed apically; palps small, but distinct.

Wings (left wing of this specimen unfortunately missing) relatively long, faintly tinted yellowish brown throughout, the veins yellowish brown; first posterior cell broadly opening on costal margin, scarcely or not narrowed apically; second submarginal cell with an appendix; discoidal cell shortly stalked apically; halteres racket-shaped, their broadened apical part darkened above.

Legs moderately long; hind femora slightly thickened, subspindle-shaped, broadest slightly beyond middle, armed below with the usual double row of relatively short, yellowish white spines on tubercles, about 7 in both rows; front and middle femora unarmed below, front and middle tibiae slightly curved, the spicules on former not so well developed as on middle ones; spicules on tubercles in outer lower row in apical half of hind tibiae stout and spine-like; basal joint of hind tarsi slightly longer than claw-joint; hind claws more strongly developed, sickle-shaped, those of front tarsi least developed, more

hook-like; pulvilli well developed, but not reaching apices of claws.

Genital segments with tergite 8 slightly pointed apically; acanthophorites each with 6 detectable brownish, dorsally-grooved and apically bluntly-pointed spines, the last (or apical) one being spine-like; anal lobes with some stoutish spine-like bristles basolaterally.

From the single ♂ holotype in the South African Museum.

Length of body: about 15,3 mm

Length of wing: about 12 mm

Distribution

South West Africa: Damaraland: Karibib (H. D. Brown, 20/5/1959).

The ♀ of this species may be easily recognized by its marked bareness and feebly-developed vestiture on body. Superficially this ♀ resembles the ♀♀ of some similarly-coloured forms of *mauricei* Beq., but may at once be distinguished by the absence of longish hairs on ptero- and metapleurae, sides basally of tergite 1, and basolaterally on hind coxae, distinctly longer antennae, more broadly opening first posterior cell, and fewer spines on acanthophorites.

From the ♀ of *matetsiensis* Beq., which is also very bare, it may be distinguished by the mainly black body, absence of even, sparse longish hairs on ptero- and metapleurae, sides of metanotum and first tergite, slightly longer antennae, broadly yellow discal hinder part of tergite 7, dark infusion laterally on apical part of hind femora, etc.

The possibility that this ♀ may be that of the ♂ *damarensis* n.sp., which is also very dark bodied, with mainly dark clypeus, antennae, and proboscis, and also with very pale legs, is however ruled out by the distinctly very much longer antennae, much shorter proboscis, apically much narrowed first posterior cell, and more numerous spines on hind femora below of the ♂ *damarensis*.

Afroleptomydas (*Crossoprosopus*) *femoralis* n.sp.

A pale-coloured ♂ specimen from South West Africa, with comparatively thickened hind femora and belonging to the pale-coloured *matetsiensis*-section, is a new species which is characterized as follows:

Body rather stout and robust, with broad and robust thorax and base of abdomen, with the abdomen thickened and cylindrical; the body and legs mainly pale coloured, pale yellowish red to yellowish brown; frons and vertex black; proboscis reddish, its labella mainly black; a middle streak on anterior half of mesonotum and a broadish sublateral streak on sides of mesonotum darkened or black, ending posteriorly on each side in a smooth dark spot; mesopleural and sternopleural parts obscurely darkened, more brownish or castaneous; metanotum also darkened, more brownish in hinder half; hind margins of tergites, including tergite 8 broadly and conspicuously ring-like, yellowish white, becoming narrower on posterior tergites; hind margins of sternites 1–7 also broadly yellowish white; sides of transverse basal depression of tergite 2 slightly darkened; tergites 2–5 basally obscurely darkened, and

extreme sides of 5–7 and more or less basal half of sternite 8 also darkened, more blackish brown; anal lobes tending to be paler, more yellowish; bullae transversely elongate, widely separated, their posterior halves orange yellowish and anterior halves black and shining, the extreme hind margins also darkened, their anterior margins with a row of granules; legs mainly pale yellowish brown, the anterior and middle trochanters darkened behind, the outer faces of femora, especially hind ones, showing through very slightly dark in certain lights, with the spines on hind femora below pallid on reddish yellow tubercles, the granules below hind tibiae shining dark reddish brown to almost black, and apical halves of claws black.

Integument of central part of frons, clypeus and head below shining; that of mesonotum dull, leathery, with setiferous puncturation lodging the short decumbent hairs; scutellum smooth, shining; metanotum mainly dull; pleurae mainly dull, but propleural and sutural parts, as well as sclerites below wing-bases, more or less shining; abdomen mainly dull, but lateral basal parts of tergites and ring-like hind margins subshining, the tergites mainly setiferously punctured, lodging the hairs; sides of exposed parts of tergite 8 and processes of sternite 9 shining; venter subshining, the pale hind margins of sternites more shining; legs with the trochanters shining, the femora subshining, more shining below, the femora and tibiae with fine setiferous puncturation, lodging the hairs.

Vestiture rather dense, dense, long and creamy whitish on head, sparser and more white on head below; that on thorax above dense, creamy white, longer on sides and posteriorly in front of scutellum; that on disc of mesonotum shorter, directed backwards, gleaming sericeous yellowish, arranged in a narrow central denser streak and two broader submedial denser streaks, and a broadish sublateral, less dense, barer streak, ending posteriorly in an entirely bare spot on each side; pleurae with faint tomentum on dull parts, the long hairs across hind part of mesopleuron, on pteropleuron, and metapleural parts also creamy white; longish dense hairs on metanotum, tergite 1 (and its sides), tergite 2, on sides especially, and to a feebler extent basally on sides of 3 also creamy white; short, backwardly-directed hairs in setiferous punctures on rest of abdomen above not very dense, gleaming sericeous yellowish to pale golden, slightly longer and sparser on sides of tergites; hairs on venter slightly longer than on dorsum, sparser, also gleaming sericeous yellowish to pale golden; hairs on hypopygium rather sparse, pale golden; those on legs gleaming pale sericeous yellowish, slightly longer and denser on femora above, comparatively dense on front and middle femora above; tomentum on head dense, greyish white, present on sides of frons, vertex and behind eyes; greyish tomentum also present on mesonotum along the streaks of hairs; metanotum also with faint greyish tomentum.

Head broader than thorax, with the vertex sunk in, interocular space on vertex subequal to length of central part of frons to antennae and also subequal to narrowest part of width of interocular space on head below; some slender whitish postvertical spines present; antennae with only joints 1 and 2 present

in specimen, the former quite 2½ times length of the comparatively short joint 2 and not much thickened; clypeus with an indication of a central groove; proboscis about 1,96 mm long, much shorter than vertical length of eyes, its labella a little less than twice length of rest of proboscis; palps small.

Wings glassy hyaline, with a scarcely perceptible milky whitish tint in certain lights; costal vein, basal part of second vein and parts of veins at base of wings yellowish, the rest darker, more brownish; second submarginal cell with an appendix; first posterior cell slightly narrowed apically, opening (or sessile) on costal margin; discoidal cell shortly stalked apically; halteres whitish, their knobs slightly darkened medially above.

Legs stoutish; hind femora markedly thickened, more so than in most other species, armed below with a double row of rather short, stout, whitish spines on tubercles (11–12 in outer row and 11 in inner row, beginning near base) and in right femur also with a small sublateral, subapical spine on each side; front and middle femora unarmed; front and middle tibiae slightly curved, the front ones with an outer lower row of large spicules, those on dorsum small, the middle tibiae with more or less two rows of longer spicules below and two irregular rows of shorter ones above; hind tibiae with irregular rows of setiferous granules below, the outermost ones in apical part with longer and stouter spicules; basal joint of hind tarsi dorsally subequal in length to claw-joint.

Hypopygium with the lateral lobes of tergite 9 rather sharply angular; sternite 9 relatively rather small, conical, bluntly rounded apically and there medially sulcate, its processes projecting much beyond apex of sternite, their slender part, in side view, almost straight, more narrowed and rounded apically in dorsal view; aedeagal apparatus with the phallic tubes much shorter than the shoe-horn-shaped dorsal epimere.

From the single ♂ holotype in the South African Museum.

Length of body: about 19 mm

Length of wing: about 12 mm

Distribution

South West Africa: Kaokoveld: Otjivakandu (sometimes spelled Otjivakondo) (H. D. Brown, 27/4/1970).

From the ♂ of *matetsiensis* Beq., which it resembles superficially, it may however be distinguished by the distinctly stouter body, shorter proboscis, denser hairs on head in front, denser and longer hairs on the usual hairy parts of body, broader ring-like hind margins of tergites, more orange-coloured discal part of bullae, more thickened hind femora, more numerous granules on hind tibiae below, and straighter, less sinuous processes of sternite 9.

Afroleptomydas (*Crossoprosopus*) *browni* n.sp.

Some ♂♂ and ♀♀ from the Okovango River region in the collections constitute a new species belonging to the mainly pale-coloured *matetsiensis*-section. With great pleasure this new species is named after the collector and

donor, Dr H. D. Brown, of the Department of Agricultural Technical Services. The ♂♂ are characterized as follows:

Body with the head mainly black; clypeus, buccal cavity, and to a certain extent lower parts of genae and head below, yellowish brown to dark reddish brown; proboscis yellowish brown below, usually darkened above, the labella mainly dark to black; antennal joints 1 and 2 yellowish to yellowish brown and basal part or half of 3 also yellowish brown to reddish brown to a variable extent, rest of 3 and basal part of clubs dark or black; greater part of clubs conspicuously orange yellow, the sensory area sometimes also darkened; thorax above dark or black, the humeral tubercles, area around them, notopleural sides of mesonotum, postalar calli, narrow base of mesonotum, and scutellum yellowish brown to reddish brown, the humeral tubercles themselves more conspicuously pale yellowish, and sometimes with an indication of a faint narrow, sublateral, reddish or yellowish streak discally on each side of mesonotum; connection between postalar calli and scutellum with a conspicuous black spot, continuous with the black hollow on each side of scutellum; metanotum reddish brown to dark reddish, usually darker centrally and to a variable extent in apical half, sometimes paler on extreme sides; pleurae with the anterior and lower parts darkened or black to a variable extent, the upper anterior part of mesopleuron, area below wing-bases, pteropleuron (or apical half of it), and metapleural parts around and below halteres, and hypopleural part being yellowish brown, with a black spot or streak anteroventrally to posterior spiracle, extending down, sometimes broadly, to metasternum, the sternal parts also mainly dark or black to a variable extent; abdomen cylindrical, mainly reddish brown, the discal basal half or more of tergite 1 and to a variable extent the extreme lateral margins of the tergites black or darkened; tergites 3–7 sometimes discally appearing slightly darkened in certain lights; hind margins of tergites 1–8 broadly yellowish white, the bases of these rings tinted orange to a variable extent; venter yellowish to yellowish brown, the hind margins of sternites also broadly yellowish, more evident on sides, the medial part shining through more brownish; bullae black, shining, not pitted; legs mainly reddish brown, the tibiae and tarsi sometimes appearing more yellowish, the base of hind tibiae sometimes more yellowish, the apices of claws black.

Integument of central part of frons, clypeus, and head below as usual smooth and shining; that of proboscis and labella, antennal joints 1 and 2, and basal part of 3 also shining; mesonotum dull, leathery, with some setiferous punctures lodging the vestiture where present; postalar calli and scutellum more shiny; metanotum transversely slightly rugulose on sides, mainly dulled by tomentum; pleurae mainly dulled by fine bloom or tomentum; abdomen dulled by a slight greyish bloom which in these mounted specimens gives it a slight oily appearance, the underlying integument very finely microareolate and with fine, separated, setiferous puncturation lodging the hairs, the transverse basal depression of tergite 2 and much narrower one across 3 shining, and the extreme

sides of tergites (not covered with bloom) also shining; ring-like hind margins of the tergites more or less subshining; tergites 3–7, in certain lights, showing shallow, transverse striae on sides; venter smooth, shining, with indications of transverse striation on sides of sternites and on posterior sternites, the integument also with fine, separated, setiferous puncturation where hairs occur; legs subshining, the femora more shining below, with indications of transverse striation on both femora and tibiae, the surface also covered with fine setiferous puncturation lodging hairs.

Vestiture moderately long, mainly white; hairs in tufts on head in front very dense, snow white, leaving bases of antennae, space below antennae, and dorsum of clypeus bare; rest of long white hairs on vertex, occiput, and head below not so dense; whitish or pale yellowish white postvertical spines present, shortish and bristle-like; sides of frons and face narrowly, sides of vertex, and most of occiput to lower part of eyes densely covered with greyish white tomentum; hairs on mesonotum more or less arranged in 5 streaks, the central one narrowest, the broad one on each side composed of dense, decumbent, longish, snow white hairs, the submedial streaks begin with a patch of dense, longish, white hairs which become shorter discally and also less dense, sometimes with a scarcely perceptible sericeous yellowish tint, the narrow central streak of short, decumbent, whitish or pale sericeous yellowish hairs end in a patch of denser, longer, snow white ones in front of scutellum, the broad lateral and submedial streaks also with greyish tomentum; hairs on metanotum fairly dense, long, snow white, directed forwards and absent from a broad central streak, the surface also with greyish tomentum; pleurae mainly with fine, slightly greyish yellow bloom or tomentum, the hind margin of mesopleuron with or without a few longish white hairs, the pteropleuron and area in front of halteres with sparse, longish, white hairs, but hypopleuron and area below halteres conspicuously bare; prosternal and metasternal parts however with longish white hairs like the dense white ones transversely across in front of hind coxae; abdomen with fairly long, dense, snow white hairs basally on tergites 1 and 2, especially on sides, with some long ones also on sides of tergite 3 basally and some shorter ones on sides of 4; rest of abdomen above with short, decumbent, somewhat separated, slightly sericeous yellowish gleaming hairs in fine, setiferous punctures, slightly denser discally on tergite 2 and slightly longer on sides of tergites; decumbent hairs on venter very slightly longer than above, also gleaming slightly sericeous yellowish, absent from extreme sides of sternites; hairs on hypopygium as separated as on tergites, more or less equally spaced, very slightly longer, but also gleaming pale sericeous yellowish; hairs on legs comparatively short, long and snow white only on outer side of hind coxae, gleaming slightly sericeous yellowish in certain lights on rest of legs, those ventro-laterally on outside of femora slightly longer than dorsally.

Head broader than thorax; vertex sunk in, the interocular space on vertex subequal in width to, or only very slightly broader than, space below head, the margins of eyes converging above and below; antennae subequal in length to

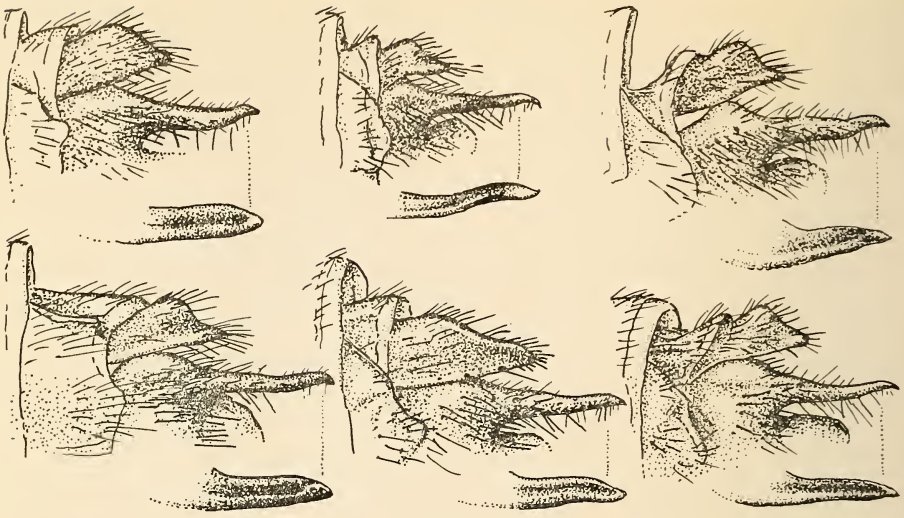

Fig. 2.

Side view of left lateral lobe of tergite 9 and side and dorsal views of left process of sternite 9 of ♂♂ (all to same scale) of:
Afroleptomydas (*Crossoprosopus*) *angolensis* n.sp. (top left).
Afroleptomydas (*Crossoprosopus*) *ovamboensis* n.sp. (top middle).
Afroleptomydas (*Crossoprosopus*) *nigrescens* n.sp. (top right).
Afroleptomydas (*Crossoprosopus*) *cognatus* n.sp. (bottom left).
Afroleptomydas (*Crossoprosopus*) *aridicolus* n.sp. (bottom middle).
Afroleptomydas (*Crossoprosopus*) *browni* n.sp. (bottom right).

mesonotum, with joint 1 only slightly thickened, about 2–2⅓ times length of 2, joint 3 about, or usually a little more than, 3 times combined length of 1 and 2, usually a little shorter than club, the latter elongate pyriform, broadest beyond middle nearer apex, sometimes slightly constricted at about the middle, with a distinct, well-marked-off, basal, neck-like constriction, its apical sensory area demarcated by a ridge below, rapidly conically narrowed below to the crater-like tubercle; proboscis comparatively short and stout, slightly upcurved, shorter than vertical length of eyes, about 1,8–2 mm, its labella about a third, or a little more, of its length; palps small, but distinct, with some brownish hairs.

Wings clear hyaline, with a very faint yellowish tint in certain lights; costal and subcostal veins yellowish, the rest of veins yellowish brown, those in hinder part more brownish; base of second submarginal cell more often acute, sometimes however truncated, with an appendix; first posterior cell narrowed apically, more often narrowly opening on costal margin, occasionally just subtending on it or even broadly opening on it; discoidal cell usually shortly stalked apically; halteres racket-shaped, pallid, the broadened apical part usually darkened above to a variable extent.

Legs moderately long, the front and hind femora subspindle-shaped, but hind ones much thickened; front and middle ones unarmed below, but thickened

hind ones armed below with the usual double row of whitish to yellowish white spines on dark tubercles (about 9–11 in outer row, beginning near base and 7–11 in inner row); tibiae slightly curved, the spicules along inner and lower aspect of front ones not developed and those along outer lower aspect less developed and shorter than on middle tibiae as are also the apical spurs; spicules on hind tibiae on small tubercles, those from middle towards apex in both the inner and outer rows becoming longer; basal joint of hind tarsi subequal to, or only very slightly longer than, claw-joint; claws well developed, the hind ones longer, more sickle-shaped; pulvilli well developed.

Hypopygium (cf. Fig. 2, bottom right) with the lateral lobes of tergite 9 slightly produced and angularly pointed; sternite 9 navicular, longitudinally striated, apically with a vertical sulcus, in side view conical, bluntly or roundly pointed apically, its dorsal process or prong on each side projecting much beyond the sternite, in side view slender, slightly upcurved near apex, its sharp apex slightly bent down, in dorsal view slightly hollowed, narrowed apically and fairly sharply pointed, the apices slightly diverging; aedeagal apparatus with the shoe-horn-shaped epimere slightly broadened apically, projecting beyond and longer than the divergent phallic tubes.

The ♀ specimens, caught at the same time as the ♂♂ and at the same localities, which I take to be the ♀♀ of this species, are characterized as follows:

Body mainly or almost entirely reddish brown to dark brown; frons black and shining; clypeus and head below dark reddish as in ♂, the former also brilliantly shining; proboscis as in ♂ yellowish brown below, the lower half and apex, or entire labella, darkened; antennae similarly coloured, joint 3 tending to become darkened, the greater part of clubs sometimes even more conspicuously orange yellow; thorax above more dark reddish brown to blackish brown, a middle streak and a broader sublateral one on each side tending to be slightly darker than the rest; humeral tubercles yellowish as in ♂; scutellum, metanotum, and pleurae similarly coloured, but latter sometimes more uniformly reddish brown; abdomen stouter, sometimes broad, dorsoventrally depressed, mainly reddish brown to dark reddish brown, the anterior transverse depression and anterior discal half of tergite 1 dark or blackish brown as in ♂; hind margins of tergites 1–5 discally very broadly yellowish, narrower on sides, that of 5–7 extending basalwards discally, and tergites 6 and 7 discally extensively infused yellowish, with 7 almost entirely so discally, their extreme hind margins discally not yellowish but narrowly darkened; basal part and sides of tergite 7 and to a variable extent extreme sides of 2–6 sometimes much darkened; bullae black and shining as in ♂; tergite 8 mainly dark reddish brown, more yellowish apically; venter mainly yellowish brown to dark reddish brown, the hind margins of sternites shining through brownish as in ♂, only extreme sides and sometimes extreme hind margins of 1–6 narrowly yellowish to a variable extent; legs coloured as in ♂, though sometimes darker, the tibiae and tarsi sometimes appearing more obviously yellowish, sometimes basal part of hind tibiae more distinctly yellowish.

Integument of head in front, antennal joints 1 and 2, proboscis, and abdomen above and below mainly smooth and shining; thorax above, metanotum and pleurae dull as in ♂, covered with faint bloom or tomentum, the metanotum transversely grooved on sides; mesonotum dull, leathery, with streaks of fine setiferous puncturation where fine hairs are present; tergites 7 and 8, especially the latter, transversely striated or grooved, and sides of 3–6 sometimes also showing transverse striation to a variable extent; legs subshining as in ♂, the fine transverse striation on femora more evident.

Vestiture, unlike that of ♂, poorly developed; short hairs on vertex, anteriorly across frons, across sides of clypeus, and on head below shorter than in ♂ and with a distinct sericeous yellowish tint, those on sides of clypeus sometimes even more yellowish or golden; those on occiput also shorter than in ♂; postvertical spines more evident and sometimes more yellowish brown; greyish yellowish tomentum narrowly present along eye-margins and dense, greyish white tomentum also present on occiput as in ♂; hairs on mesonotum very fine, short, gleaming sericeous yellowish to slightly golden and arranged in streaks as in ♂, those on sides of mesonotum very fine, short, not dense and whitish as in ♂; hairs on pleurae almost absent and very short; those on metanotum very short, fine, scarcely detectable; tergites 1 and 2 discally with fine, greyish bloom or tomentum; tergite 1 discally also with fine, short hairs; sides of tergite 1 with fine, short, sericeous yellowish hairs; tergites 3–6 mainly smooth; tergites 7 and 8, especially latter, with forwardly-directed, dark brown or blackish brown hairs; hairs on genital segments also blackish brown; venter smooth, bare and shining, with fine, short, reversed, widely-spaced, yellowish brown hairs present only on last two sternites; hairs on legs as in ♂, but only shorter, those on coxae also much shorter and sparser and more sericeous yellowish.

Head similar to that of ♂; proboscis similar, about 1,5–1,8 mm long; antennae similar, with the same shape and the same relationship between the joints.

Wings tinted slightly more yellowish brownish, appearing darker, the veins however with distinct fuscous borders, especially in middle part of wings, rendering the wings darker and making the costal cell, basal half of first submarginal cell, and almost entire first basal cell dark, and the discoidal and second basal cells with clear streaks in middle; other venational characters as in ♂; halteres very similar.

Legs like those of ♂; hind femora also thickened, but slightly less so, not so distinctly subspindle-shaped, armed below with the usual double row of similar spines (in this case 8–12 in outer row and 8–9 in inner one); front femora however with some distinct, spicule-like or hair-like spines along inner side below; spicules on tibiae longer and more developed than in ♂, and those on hind tibiae distinctly more so.

Genital segments with about 8 relatively slender, yellowish brown to dark or blackish brown spines on each acanthophorite, the apical last one being

more slender or spine-like.

Described from 10 ♂♂, including the holotype, and 4 ♀♀, including the allotype, in the South African Museum.

Length of body: about 14–18 mm (♂♂) and 15–17 mm (♀♀)
Length of wing: about 10,5–12,5 mm (♂♂) and 11–12,5 mm (♀♀)

Distribution

Northern and north-eastern South West Africa: Kungveld: 48 km north of Rooidag Gate (H. D. Brown, 7/4/1970) (♂ holotype, ♀ allotype, 1 ♂ paratype and 1 ♀ paratype); Kungveld: 96 km north-east of Rooidag Gate (H. D. Brown, 8/4/1970) (1 ♂ paratype); 6 km south of Mukambo, Okavango (Okovango) River (H. D. Brown, 17/4/1970) (1 ♂ paratype and 1 ♀ paratype); 30 km west of Kurenkuru (Kuringkuru), Okavango (Okovango) River (H. D. Brown, 16/4/1970) (6 ♂ paratypes); Ovamboland: Border Beacon 24 between South West Africa and Angola (H. D. Brown, 19/4/1970) (1 ♀ paratype).

This species differs from *matetsiensis* Beq. by the slightly darker reddish abdomen, shorter antennae, more slender third antennal joint, distinctly much shorter proboscis, shorter vestiture, comparatively shorter legs, shorter claws, apically less broadly open first posterior cell in wings, and more slender and narrower processes of sternite 9 in ♂.

Genus NAMADYTES Hesse

Namadytes Hesse, 1969: 278.
Namamydas Hesse, 1969: 284 (n.syn.).

The discovery of two additional species of *Namadytes* from South West Africa, described below, and of which one is represented by both sexes, proves without doubt that the ♂ sex of *Namadytes* (unknown at the time of description) is identical generically with the ♂ described by me as *Namamydas*. The latter genus thus falls away as a synonym of *Namadytes*.

The genus *Namadytes*, now represented by 5 known species (2 by ♂♂ only, 2 by ♀♀ only and 1 by both sexes), all from Great Namaqualand in the southern semi-arid half of South West Africa, may be redefined as follows:

Body with the abdomen tending to be pointed apically, more so in ♀♀, also rather markedly broad in basal half in ♀♀, its dorsum on certain tergites infused with yellowish or yellowish ochreous to a variable extent, sometimes mainly or almost entirely yellowish; mesonotum discally sometimes with pale or yellowish streaks; pleurae sometimes also extensively yellowish; tergite and sternite 8 tending to be shortened.

Integument mainly dull, dull and with leathery microsculpture on mesonotum and metanotum; abdomen dulled towards apex, with dense, transverse, 'nadelrissig' puncturation in ♂♂; terminal abdominal segments in ♀♀ rather coarsely, transversely, rugulosely striate or grooved; middle part of frons, postalar calli, scutellum to a variable extent, tergite 1, and legs to a variable

extent shining; femora distinctly transversely finely striate.

Vestiture in some ♂♂ fairly long and dense on head, thorax, base of abdomen, and legs, rather sparse in others; in ♀♀ more poorly developed, short and sparse on thorax above, pleurae, and tergites 1 and 2; mesopleuron with some hairs along posterior margin in both sexes, though very sparse in ♀♀; metanotum bare or with scarcely discernible, very short, and fine ones on sides.

Head relatively broad, markedly broad across eyes in ♂♂, broader than across broadest part of thorax; interocular space on vertex very broad, much broader than interocular space on head below, being nearly, or only a little less than, twice distance between antennae and vertex; vertex a little sunk in; eyes comparatively large and convex; antennae (cf. Fig. 3, left and middle; Hesse 1969: 280, 284, figs 15–16) shortish, joint 3 about as long as, or shorter than, rarely longer than, club, the latter elongate pyriform, more dilated beyond middle, its apical sensory area terminal, subtruncate, or truncate, or obliquely crater-like, sometimes appearing sunk in; proboscis much reduced, vestigial, though the structures are still discernible in miniature, the stem being shorter than labellar part; palps minute, not longer than the vestigial proboscis; buccal cavity reduced and shallow.

Wings rather short, not projecting much beyond apex of abdomen, hyaline in ♂♂ and with a feeble milky white sheen, in ♀♀ usually infuscated in middle parts, especially along the veins; alula broad, lobe-like; second submarginal cell usually with a basal appendix; first posterior cell either opening narrowly on costal margin or much narrowed apically and angularly subtending on it, or with a short apical stalk (thus apparently opening on apex of second vein); apex of discoidal cell either meeting posterior veins at a point or with a short stalk.

Abdomen cylindrical in ♂♂, slightly flattened in ♀♀, with only 7 segments clearly visible in ♂♂, segment 8 not, or scarcely, visible, and only so on sides; a projecting appendage, process or lobe (cf. Fig. 3, right AP) on each side between lobe of tergite 8 and sternite 8 (probably arising dorsally from base of sternite 8) present in ♂♂ of some species; bullae comparatively small, smaller in ♀♀, widely separated.

Legs comparatively short, the tarsi, especially front and middle ones, also comparatively short; tibiae slightly curved; hind femora slightly clavately thickened, armed below with a double row of slender spines in apical half beyond middle which become progressively longer towards the apex; spicules on tibiae slender, bristle-like, sometimes very short, the apical ones on hind tibiae much longer than those of other tibiae; basal tarsal joint of hind legs slightly thickened, longer than claw-joint; pulvilli in ♀♀ distinctly reduced, not, or scarcely, extending beyond middle of claws, the latter in ♀♀ also less rapidly curved down apically.

Hypopygium of ♂♂ (cf. Fig. 3) with the combined anal lobes well developed; lateral lobes of tergite 9 only a little produced, only slightly lobe-like or obtuse-angular, not sharply or angularly produced as in some other genera and species,

the hind margins of the lobes with markedly long bristly hairs on sides; lateral lobes of concealed tergite 8 sometimes discernible or projecting; sternite 9 inflated, rounded apically, centrally slightly grooved, not keeled, apically; processes on sides of the sternite slightly curving inwards apically, bluntly rounded apically and directed slightly upwards, the apical half below usually with dense tooth-brush-like hairs; aedeagal apparatus in form of an apically-obliquely-truncated, columnar or triquetrous process in the truncated part of which, resembling the apex of an elephant's trunk, there are the gonoporal structures of the two parallel, contiguous or subcontiguous, phallic tubes, and dorsally (anteriorly) to these the central-rod-like, slightly more projecting epimere (cf. Fig. 3, centre and right; Hesse 1969: fig. 17).

Genital segments in ♀♀ with the last vertical genital segment markedly shortened, the vertical carina shorter than half the length of lower margin of acanthophorite; the latter armed with a row of rather slender spines.

The type-species of this genus is the ♀ of *Namadytes vansoni* Hesse (Hesse 1969: 280) and the typical characters of the ♂ are embodied in the generically synonymic ♂ *Namamydas maculiventris* Hesse (Hesse 1969: 284, 285).

This genus resembles the North African genus *Syllegomydas* Beck. and the South West African representative (subgenus *Notobates* Hesse) of it superficially in the much reduced and vestigial proboscis, vestiture, and wing-venation, but in the ♂ sex it may at once be distinguished by the entirely different aedeagal apparatus. The ♀♀ differ by the distinguishing characters given by me (Hesse 1969: 278, 279), but chiefly by the broader interocular space on vertex, less reduced buccal cavity and proboscis, the less consistently stalked first posterior cell, which, if stalked, is not stalked on second vein but on costal margin, by the much shorter vertical carina on genital segment, and by the more reduced pulvilli.

The five known species may be separated as follows:

1(*a*) Males 2

(*b*) Females 4

2(*a*) Mesonotum and pleurae mainly dark or black; abdomen with more extensive dark or black markings discally and laterally; greater part of femora and at least front and middle tibiae darkened; hind femora distinctly more clavately thickened; pulvilli shorter, falling short of apices of claws; antennal clubs darker or with only apical part paler, yellowish; base of second submarginal cell with a longer appendix; lateral lobes of tergite 9 more obtusely rounded apically; processes of sternite 9 relatively shorter; no projecting lobe on each side from base of sternite 8 discernible; smaller species, about 10–15 mm long, with a wing-length about 7,7–11 mm 3

(*b*) Mesonotum with the sides and 2 submedial streaks pale yellowish reddish and greater part of pleurae mainly yellowish; abdomen mainly, or more extensively, yellowish, or with less extensive dark markings, only discally on tergites 1–3; legs entirely or mainly yellowish; hind femora more slender; pulvilli longer, broader, reaching apices of claws; at least apical half of clubs orange yellowish; base of second submarginal cell with a very short appendix; lateral lobes of tergite 9 more sharply angular; processes of sternite 9 longer; a projecting lobe on each side from base of sternite 8 present; larger species, about 17–17,5 mm long, with a wing-length about 12–12,5 mm .. .. ♂ *pallidus* n.sp.

3(*a*) Larger species, about 15 mm long, with a wing-length of about 9,5 mm; abdomen above more extensively yellowish, the apical half discally mainly or extensively yellowish; entire

hind tibiae yellowish; tarsi mainly yellowish; vestiture distinctly longer and denser, that on head in front not tending to be arranged awning-like in tiers, that on abdomen, especially base, and legs much longer and denser; first posterior cell in wings with a longer apical stalk; lateral lobes or sides of tergite 9 more subangular; processes of sternite 9 longer; aedeagal apparatus thicker, more triquetrous .. .. .. ♂ *maculiventris* (Hesse)

(*b*) Smaller species, about 10–13 mm long, with a wing-length of about 7,7–11 mm; abdomen above less extensively yellowish, more black being evident, the apical half with yellowish to a variable extent only discally posteriorly and across hind margins of tergites; more than apical half of hind tibiae blackish brown like the rest; middle joints of tarsi tending to be darkened; vestiture distinctly shorter and sparser, long only on head in front where it tends to be arranged awning-like in tiers, that on abdomen and legs distinctly very much shorter; first posterior cell apically subtending angularly on costal margin, or with a very short stalk; sides of tergite 9 more rounded; processes of sternite 9 relatively shorter; aedeagal apparatus much smaller, more columnar .. .. ♂ *cimbebasiensis* n.sp.

4(*a*) Clypeus more yellowish; mesonotum yellowish, with 3 broad, nearly contiguous, black streaks; abdomen more extensively and broadly ochreous yellowish above, including greater parts of tergites 1 and 7, only 8 entirely dark; legs paler, yellowish brown, basal parts of tibiae more extensively yellowish; vestiture sparser, shorter, the metanotum bare, that on legs shorter and sparser; first posterior cell in wings distinctly shortly stalked apically; acanthophorites of last genital segment each with about 6 spines ♀ *cimbebasiensis* n.sp.

(*b*) Clypeus brownish; mesonotum mainly dark or black, only sides obscurely paler, densely covered with greyish tomentum; leaving only 3 widely-separated dark bare streaks; abdomen above less broadly yellowish and, if extensively yellowish, at least apical half of tergite 1 and tergites 6–8 dark; legs darker, more brownish, only knees yellowish; vestiture slightly denser, longer, the metanotum with some short hairs on sides, hairs on legs distinctly longer, denser; first posterior cell either broadly sessile, subtending angularly, or narrowly open, on costal margin; acanthophorites each with about 7–9 spines .. 5

5(*a*) Tergites 3–5 broadly ochreous yellowish discally, to a lesser extent also on 2 discally, central discal part of 6 reddish; hind margins of tergites 1–3 and 4 and 5 yellowish white discally; last tergite more coarsely grooved; antennal joint 3 much shorter, it plus 1 and 2 as long as club, the latter more rapidly thickened from base; proboscis evident only as a small globular labella; infusion in wings less conspicuous along veins; apex of first posterior cell narrowly open; acanthophorites each with about 9 spines; larger species, about 18 mm long .. .. ♀ *vansoni* Hesse

(*b*) Tergites 3–5 yellowish discally only on posterior two-thirds; hind margins of tergites 1–4 and discally on 5 and 6 more whitish; last tergite less coarsely grooved; antennal joint 3 much longer, only a little shorter than club, the latter more gradually thickened to beyond middle; proboscis rudimentary, but with a distinct short stem and labella; infusion in wings more evident in middle part, darker there, more blackish brown along veins; apex of first posterior cell angularly subtending, or sessile, on costal margin; acanthophorites each with about 7 spines; slightly smaller species, about 15 mm long .. ♀ *prozeskyi* Hesse

Namadytes maculiventris (Hesse) n.comb.

Namamydas maculiventris Hesse, 1969: 285, figs 16–17 (n.syn.).

This species, represented by a unique ♂ from Vioolsdrif in the Richtersveld, was described by me as the type-species of my new genus *Namamydas* which at the time was however represented by the male sex only. The subsequent discovery of a new species of *Namadytes*, represented by both sexes and described below, shows without doubt that this ♂ *Namamydas maculiventris* belongs to the other new genus *Namadytes* described from ♀♀ only a few pages ahead.

Namadytes cimbebasiensis n.sp.

This comparatively smallish new species* from South West Africa, represented by both sexes collected at the same locality and on the same date, shows that there are distinct differences between the ♂ and ♀ as far as the colour of the body, the vestiture, the infusions along the wing-veins, and the length of the pulvilli are concerned and proves without doubt the generic identity of the ♀♀ of *Namadytes* and the ♂♂ of *Namamydas*.

The species is characterized as follows:

Body in ♂ with the head, thorax above, metanotum, pleurae, and basal half, or greater part, of tergite 1 mainly black; discal basal patches on tergites 2–4 (or sometimes 2–7), lateral patches on these segments, sometimes entire segments 5–7 above and below, and medial infusions on ventral sternites 2–4 blackish brown; vestigial proboscis yellowish and lower part of rims of buccal cavity yellowish white; the following parts yellowish: shoulders to a variable extent, extreme sides of mesonotum, postalar calli, hind border of scutellum, pleural part below wing-bases, pteropleuron to a variable extent, metapleural part below halteres, halteres, sides of tergites 1–4 (or 5), and sternites 1–4 (or 5); hind margins of tergites and sternites comparatively broadly more yellowish white; bullae relatively small, blackish, widely separated; legs brownish, the apices of femora, basal parts of middle and hind femora, bases, posterior and apical parts of hind coxae, bases and extreme apices of tibiae, and bases and apices of tarsi yellowish; antennae brownish, articulations of joints 1 and 2, bases and apices of joint 3 and, to a variable extent, apical half or part of clubs yellowish; hypopygium yellowish to pale yellowish brown.

Body in ♀ mainly ochreous yellowish; antennal joints below, part of face below antennae, and the clypeus also yellowish; mesonotum with 3 broad, almost contiguous, posteriorly-abbreviated, black streaks; pleurae mainly yellowish, with slight brownish infusions on meso-, sterno-, and hypopleurae, and sternal parts in front of coxae; metanotum blackish brown; base of tergite 1, the transverse groove across base of 2, patches on sides of tergites 2–7, and entire tergite 8 also blackish brown, the extreme lateral margins of these tergites being darker, almost black; venter mainly yellowish except for some slight brownish infusions along middle; hind margins of tergites broadly yellowish white; bullae smaller than in ♂, blackish; lobes below genital segment yellowish; legs almost entirely pale yellowish, only the coxae in front, subapical parts of front and middle femora above, at least apical half of hind femora above, apical half of hind tibiae, and middle parts of rest of tibiae with a slight touch of brownish.

Integument with the middle part of frons, face and clypeus shining; mesonotum and metanotum dull, leathery; pteropleuron somewhat shining; abdomen above with the basal parts and especially basal transverse groove across tergite 2 also shining, rest of abdomen in ♂ with fine 'nadelrissig' puncturation, in

* As coming from 'Cimbebasia' an old name for South West Africa.

♀ smoother and somewhat shining, with a lateral intramarginal streak of fairly coarse rugose puncturation along sides of tergites 2–5, coarser in ♀; tergites 7 and 8 in ♀ transversely grooved, the latter more coarsely so; legs subshining, the femora finely transversely striate.

Vestiture denser and longer in ♂, in ♀ very sparse, absent from greater part of abdomen, that on head in front in ♂ long and dense, sericeous white, arranged awning-like across vertex, sides of frons, above antennae, and across clypeus, in ♀ arranged similarly, but very much sparser, the sides of frons and face with more evident, denser, grey tomentum; hairs on mesonotum sericeous white, arranged more or less in 4 streaks, longer, denser, more evident in front half and medially posteriorly, much shorter and sparser in ♀; hairs on pleurae sparse in both sexes, more so in ♀, whitish, present only on mesopleuron posteriorly, on pteropleuron, part of metapleuron anterior to halteres, and on sternum in front of posterior coxae, and very sparse in ♀; hairs on abdomen of ♂ fairly dense, but short, long and white on sides of tergite 1, fine and short, decumbent, located in the fine puncturation, gleaming more sericeous yellowish, slightly longer on lateral lobes of tergite 9 and on anal lobes, sparse and short on venter, but as dense and as long in puncturation on sternites 5–7 as above; hairs on abdomen in ♀ with a few sparse longish ones on sides of tergite 1, very short and sparse and almost absent from rest of tergites except for sparse,

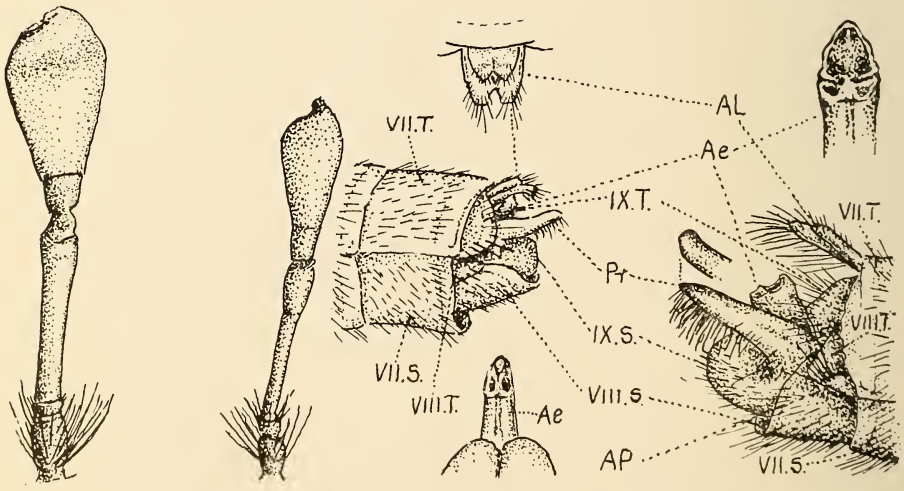

Fig. 3.

Left: Inner view of right antenna of ♂ *Namadytes pallidus* n.sp. Centre: Right antenna of ♂ *Namadytes cimbebasiensis* n.sp. (left); hypopygial structures (centre) of ♂ of same species, with dorsal view of anal lobes (top) and much enlarged aedeagal apparatus (below).

Right: Hypopygial structures, from right side, of ♂ *Namadytes pallidus* n.sp., with enlarged posterior view of the aedeagal apparatus (top).

(Ae = aedeagal apparatus; AL = anal lobes; AP = appendage or lobe of ?sternite 8; IX.S. = sternite 9; IX.T. = lateral lobe or tergite 9; Pr = process of sternite 9; VII.S. = sternite 7; VII.T. = tergite 7; VIII.S. = sternite 8; VIII.T. = exposed lateral lobe of hidden tergite 8.

short, reversed, slightly golden yellow ones on tergites 6 and 7, and sparse, but slightly longer, ones on 8; venter in ♀ bare, but with longer yellowish hairs on lobes below acanthophorites; hairs on legs comparatively short, gleaming sericeous yellowish in certain lights, sparser in ♀, with the spines and spicules yellowish.

Head with the interocular space on vertex broad, about as wide as distance from apex of ocellar tubercle to apex of clypeus, appearing wider in ♀ due to the smaller and less convex eyes; interocular space on head below much narrower, the inner margins of eyes converging below; antennae (cf. Fig. 3, second from left) in ♂ about as long as, or a little longer than, mesonotum, distinctly much shorter than mesonotum in ♀; joint 1 about, or a little more than, twice length of 2, not much thickened; joint 3 shorter than club, the latter elongate pyriform, with a distinct bottle-necked base, broadest beyond middle, obliquely subtruncate apically, the sensory area being fairly large; clypeus roundly convex, more so in ♀; buccal cavity shallow, apparently slightly broader in ♀; proboscis vestigial, rudimentary, ending in two small, rounded lobes and a median, dorsal, finger-like lobe; palps minute, scarcely evident.

Wings not projecting, or not projecting much, beyond apex of abdomen, the membrane markedly wrinkled, hyaline in ♂, but with a slight milky whitish tint in certain lights; veins yellowish brown, but costal and subcostal veins and those at base of wings yellowish; veins in middle part of wings in ♀ bordered with fuscous; second submarginal cell with an appendix basally; apex of first posterior cell with a very short stalk or angularly subtending on costal margin; discoidal cell rather acute apically, meeting first and third posterior cells at a point (or third posterior cell very shortly stalked apically); halteres yellowish white, sometimes slightly darkened above near inner apical angle.

Legs relatively rather short, slightly longer in ♀; hind femora clavately thickened, with a double row of yellowish spines below in apical half, beginning at about just before middle, 5–6 in outer row and 5–6 (more often 5) in inner row, on slight tubercles, those subapically at thickest part of femora the longest; tibiae in ♂ slightly curved, but hind ones in ♀ substraight, the spicules on tibiae short, except apical ones (spurs) and especially hind ones; tarsi relatively short, the hind ones longer, the tarsi in ♀ appearing much shorter owing to the slightly longer tibiae; basal joint of hind tarsi longer than claw-joint, much longer in ♀, the basal joints of rest of tarsi shorter than claw-joints; claws more rapidly bent down apically in ♂ than in ♀; pulvilli much reduced in ♀, scarcely, or not, reaching middle of claws.

Hypopygium of ♂ like that of *maculiventris* (cf. Fig. 3, centre; Hesse 1969: 286, fig. 17), with the sides of tergite 9 not projecting much, broadly rounded apically; no projecting lobe on each side between lateral lobe of tergite 8 and sternite 8 discernible; processes of sternite 9 bent slightly upwards near apex, their apices curving slightly inwards; aedeagal apparatus more slender than that of *maculiventris*, more columnar.

Genital segments of ♀ with 6 golden yellow spines on each acanthophorite.

From 3 ♂♂, including the ♂ holotype, and 1 ♀ allotype in the South African Museum.

Length of body: about 10–13 mm
Length of wing: about 7,7–11 mm

Distribution

South West Africa: Excelsior, No 127, Maltahöhe District (H. D. Brown, 7/8/1969).

The ♂ of this species is very near the ♂ of *maculiventris* (Hesse), but is smaller, with less extensive yellowish on the abdomen above, with distinctly less dense and shorter vestiture on body and legs, with the lateral lobes of tergite 9 more rounded and not so subangular, and with the aedeagal apparatus more columnar and more slender.

The ♀ differs from both the ♀♀ of *vansoni* Hesse and *prozeskyi* Hesse in its more extensively and broadly ochreous yellowish abdomen above, its paler legs, shorter and sparser vestiture, bare metanotum, apically shortly-stalked first posterior cell, and the fewer spines, only 6, on each acanthophorite.

Namadytes pallidus n.sp.

This mainly yellowish species, represented by the ♂ sex only, is characterized as follows:

Body mainly ochreous yellow; sides of face and head below dark reddish brown; frons, vertex, occipital part, and eyes black; shoulders pale yellowish white; the following parts dark or black: three broad, longitudinal streaks on mesonotum, not reaching posterior margin and lateral ones not extending to shoulders, a posterior, discal infusion on scutellum, an infusion below anterior spiracle on pleurae, continuous towards sternum with a large infusion on lower half of sternopleuron, a spot or infusion in middle of mesopleuron, an infusion on lower half of hypopleural part, hinder part of metanotum, basal part of tergite 1, basal transverse groove across tergite 2, a basal, discal, ∩-shaped mark on tergite 2, the bullae (which are widely separated), and a small, basal, discal spot on tergite 3; sides of abdomen, especially on tergites 4–7, intramarginally with a faint brownish streak in one specimen; hind margins of tergites and to a certain extent those of sternites fairly broadly whitish; antennae with joints 1 and 2 yellowish brown, joint 3 and basal part, or half, of club brownish, rest of club orange yellowish, and the junctions between joints and extreme base and apex of joint 3 yellowish; hypopygial parts yellowish like rest of abdomen; legs almost entirely pale yellowish, the front and middle femora infused with brownish to a variable extent, and apices of claws black.

Integument with the central and ocellar part of frons shining; that of mesonotum and metanotum dull and leathery; scutellum more or less shining; pleurae dull, with leathery microtexture; abdomen above subshining with fine, setiferous, 'nadelrissig' puncturation; venter more smooth and shining;

legs more or less shining, finely transversely striate, especially femora.

Vestiture fairly long and dense, about as long and dense on anterior part as in *maculiventris*, entirely snow white; that on head in front and on clypeus very dense, the sides of face also with greyish tomentum; that on mesonotum even slightly denser than in *maculiventris*, leaving 3 broad, bare, longitudinal streaks, the lateral ones not reaching shoulders; hairs on sides of mesonotum and medially in front of scutellum longer and denser than discal ones; metanotum entirely bare; hairs on pleurae, where present on propleuron, along upper and hind margins of mesopleuron, on metapleural part in front of and below halteres, and on hind coxae, long and dense; hairs on tergite 1, especially laterally, to a slightly lesser extent those on tergite 2 (more so laterally), and to a much lesser extent sides of 3 also long and dense; decumbent hairs in punctures on rest of abdomen above much shorter, but also dense; those on anal lobes and projecting sides of tergite 9 longer again; hairs on venter sparse; those on legs fairly dense, sericeous white, those on dorsal surfaces of femora markedly long; spines on femora and spicules on tibiae pale yellowish white.

Head with the interocular space on vertex about subequal in width to distance between top of ocellar tubercle to anterior rim of clypeus and much broader than space between eyes on head below which is however relatively proportionally broader than in *maculiventris*; vertex slightly sunk in; antennae (cf. Fig. 3, left) much shorter than mesonotum, joint 1 thickened, quite three times as long as 2, joint 3 rather stoutish, rod-like, much shorter than club; latter a little shorter than rest of joints combined, elongate pyriform, broadest beyond middle, its base slightly constricted bottle-neck-like and articulating part between it and apex of joint 3 rather long, the sensory area at apex of club slightly obliquely truncate; clypeus prominently roundly convex; buccal cavity shallow; proboscis much reduced, rudimentary, much shorter than antennal joint 1, evident as a short base and a short, or much shorter, bilobate labellar part; palps comparatively less reduced than in the other species and in one specimen quite as long as the reduced proboscis.

Wings just about reaching apex of abdomen, hyaline, with a slight milky white tint in certain lights, especially along costal half in basal half; membrane distinctly wrinkled; veins very pale yellowish white, those between first submarginal and first basal cells, posterior vein of first, third posterior and anal cells appearing darker in certain lights; second submarginal cell with a very short appendix basally; apex of first posterior cell with a very short stalk to costal margin; acute apex of discoidal cell with a short stalk of variable length; halteres whitish.

Legs relatively slender, more so than in the other known species; hind femora only very slightly subclavately thickened, armed below with a double row of short spines on slight tubercles (2 or 3 in outer row and 2–4 in inner one) in more or less apical third, the inner row beginning before the outer one; tibiae slightly curved, with bristle-like spicules, only the apical ones (spurs) being stoutish; tarsi with the hind ones in ♂, as in the ♂♂ of the other species

of the genus, longer than the rest, its basal joint longer than the claw-joint; claws rapidly bent downwards apically and the pulvilli well developed, broad, extending to apices of claws.

Hypopygium (cf. Fig. 3, right) with the anal lobes well developed; projecting sides of tergite 9 slightly obtusangularly prominent apically; a distinct projecting lobe-like appendage or process present on each side between lateral lobe of concealed tergite 8 and base of sternite 8 (cf. Fig. 3, right AP); sternite 9 inflated and lobe-like, rounded apically, its processes, in side view, comparatively less slender apicalwards and more rapidly narrowed from base below than in the case of *maculiventris* (cf. Hesse 1969: 286, fig. 17), also comparatively shorter and, in dorsal view, distinctly broader; aedeagal apparatus very similar to that of *maculiventris*, only stouter.

From 2 ♂ specimens (holotype and paratype) in the South African Museum.

Length of body: about 17–17,5 mm
Length of wing: about 12–12,5 mm

Distribution

South West Africa: Great Namaqualand: 48 km south-east of Keetmanshoop (J. G. Rozen and E. Martinez, 30/10/1968).

This species is very near *maculiventris* (Hesse), but, apart from the differences already mentioned in the text, may be easily distinguished by its larger size, extensively yellowish body, pleurae, and legs, its much longer wings, more slender and longer legs, and presence of a distinct projecting lobe-like process posteriorly between lateral lobe of concealed tergite 8 and base of sternite 8.

Other species of NAMADYTES

The other two known species of *Namadytes*, described from South West Africa, are *Namadytes vansoni* Hesse (Hesse 1969: 280, fig. 15) and *Namadytes prozeskyi* Hesse (Hesse 1969: 282) and both known from the ♀ sex only.

Halterorchini n.tribe

The new species of Mydaidae acquired by the South African Museum and those submitted to me for description since the publication of my revision of this family as represented in Southern Africa in 1969, and more especially representatives of the ♀♀ of two of the species described previously or now as new genera in this paper from the male sex only, necessitate a new approach to the classification of the Mydaidae.

The genus *Halterorchis* Bezzi, based on ♀♀ only, occupies an anomalous position among the genera of the subfamily Syllegomydainae and in 1969 (Hesse: 10, 17, 287) it was provisionally referred to a new tribe Syllegomydaini which at the time was erected to accommodate a long list of genera. At that time the ♀♀ of *Halterorchis* were the only ones with a reduced number of normal

abdominal segments, namely only 7, the eighth being modified to form a distinct hood over the genital segment (modified segment 9, with its acanthophorites) and sternite 8 is also modified, partially concealed, not scoop-like. Both the ♀ of a new species of *Nothomydas* Hesse and that of the new genus *Namibimydas*, described in this paper, agree with the ♀♀ of *Halterorchis* in having the same anomalous type of abdomen and modified tergite 8 and sternite 8. It is quite evident that this modification of the tergite and sternite is a constant character of group value and, as the ♂♂, not only of *Nothomydas* but also of the other two new genera *Mimadelphus* and *Namibimydas*, described below, also have only 7 normal tergites and sternites (or sternite 7 sometimes concealed), the eighth being entirely concealed and not discernible or even half concealed, this abdominal anomaly, together with certain other secondary characters which all these genera share, should be considered as of distinct tribal value.

A new tribe Halterorchini is therefore proposed to accommodate the genera *Halterorchis* Bezzi (1924), *Nothomydas* Hesse (1969), *Mimadelphus* n.gen. and *Namibimydas* n.gen.

This new tribe of the Syllegomydainae is characterized as follows:

Abdomen of both ♂♂ and ♀♀ with only 7 normal, unmodified tergites and sternites, the eighth in ♂♂ being entirely concealed and not discernible, or with only the lateral apical part exposed as a lobe-like process; a projecting process or lobe connected with the concealed sternite 8 or tergite 8 may be present in some ♂♂ (cf. Fig. 6, AP.); abdomen in ♀♀ distinctly modified when compared with the usual 8 normal, not greatly-modified, segments in the ♀♀ and the half concealed and discernible eighth segment in the ♂♂ of the other 3 tribes; tergite 8 in known ♀♀ more distinctly modified in the form of a dorsal hood over the spine-bearing acanthophorites and sternite 8 half concealed under sternite 7, its hind margin or hinder part (cf. Fig. 7, right) indented or emarginate V-like, not entirely exposed and scoop-like as in ♀♀ of the other tribes; tergite 9 in ♂♂ either produced apically on each side into a curved, flattened, dorsal process which most likely participates in copulation (cf. Figs 4, 6; Hesse 1969: fig. 18 B), or the tergite is divided into 2 lobes from the apex of each of which there extends ventrally a flattened sheet which is fused or continuous with the dorsal process on each side of sternite 9 (cf. Fig. 6); tergite 9 in ♀♀, as in genera of the two tribes Syllegomydaini and Cephalocerini, constitutes the genital segment or central carinate ridge and spine-bearing acanthophorites; sternite 9 in ♂♂ (cf. Figs 4, 6) either navicular, hollowed scoop-like, or very much enlarged and shell-shaped, indented or sulcate apically, with the edges of the indentation on each side raised carinately and externally to this the apical part is produced on each side into a flattened, curved, bluntly-pointed process, prong or a curved spine (cf. Figs 4, 6; Hesse 1969: fig. 18 B); aedeagal apparatus in ♂♂, as far as this is discernible, either rod-like, in form of a forked rod, or as a forwardly-curved process.

Other supplementary characters shared by these genera are:

Head with relatively broad to markedly broad interocular space on vertex;

antennae (cf. Figs 4, 5) comparatively short and stoutish, with much inflated, pyriform clubs which are longer than the relatively short third antennal joints; proboscis vestigial or long and very slender.

Vestiture with the hairs markedly granulated; tomentum on head, thorax, and abdomen, especially on latter, in known ♀♀ extensively developed.

Wings comparatively narrow, but with an *Afroleptomydas*-type of venation.

Legs comparatively hairy, with the apical spicules or spurs of tibiae long or markedly long.

The four known genera may be separated as follows:

♂♂

1(*a*) Proboscis rudimentary or vestigial; processes of sternite 9 more slender, spine-like; lateral processes of tergite 9 shorter, lobe-like; body above with dense, woolly or vellose vestiture *Mimadelphus* n.gen.

(*b*) Proboscis well developed, long to elongate, slender, with the labella broad or spear-blade-shaped; processes of sternite 9 broader, more flattened, strap-like; lateral processes of tergite 9 either longer, more straplike or in form of a ventral, downwardly-directed, flattened sclerite fused to processes of sternite 9; body above only hairy or densely hairy, not densely woolly or fur-like 2

2(*a*) Sternite 9 of hypopygial part much smaller, navicular, its processes downwardly curved, flattened, spine-like; lateral processes of tergite 9 projecting, curved, strap-like; sternite 7 normally developed; concealed segment 8 without a visible projecting, lobe-like appendage on each side; legs comparatively shorter, with the front and middle trochanters small, normal; apical spicules of tibiae and especially those of tarsi, not markedly elongate; smaller, less densely hairy forms .. .. *Nothomydas* Hesse

(*b*) Hypopygial part greatly developed; sternite 9 enormously developed, *Argonauta*-shell-shaped, much laterally compressed, keeled below, its processes broad, curved inwards and then slightly outwards; lateral processes of tergite 9 in form a broadened, downwardly-extending sheet united with inner part of processes of sternite 9; sternite 7 almost concealed, pushed far forwards under sternite 6 by the greatly developed sternite 9; concealed segment 8 with a distinct projecting lobe-like appendage on each side; legs comparatively much longer, the front and middle trochanters with a flattened lobe-like, basal extension; apical spicules of tibiae and those of tarsi conspicuously and markedly elongated; larger, very densely-haired Asilid-like forms .. *Namibimydas* n.gen.

♀♀

1(*a*) Tergite 9 with the raised, central, carinate ridge very short, less elevated, the acanthophorites smaller, with fewer spines, only 5 or 6, on each side, the spines slender, rod-like; trochanters of front and middle legs small, without a lobe-like extension basally; vestiture on body and legs less developed, less woolly, the hairs on abdomen above shorter and sparser, directed forwards on most of the segments, and the tomentum denser; wings much narrower; smaller forms, less than 20 mm long 2

(*b*) Tergite 9 with the raised central carinate ridge longer, more elevated, arch-like, the acanthophorites with more than 6 (about 8) spines on each side, the spines much broader, shoe-horn-shaped and hollowed above; trochanters of front and middle legs larger, with a distinct, flattened, lobe-like extension basally; vestiture on body and legs distinctly much denser, more woolly, that on abdomen above longer and denser and only that on last two segments directed forwards, and the tomentum relatively less dense; wings broader; larger forms, about 21–24 mm long .. .. *Namibimydas* n.gen.

2(*a*) Proboscis rudimentary, vestigial; half concealed sternite 8 appearing carinate or sulcate centrally, its hind margin more shallowly emarginate or indented V-shaped; hairs on head sparser, coarser, those on mesonotum leaving 3 broad, entirely bare, tomented streaks, abdomen above with a pattern of crescent- or ⌐-shaped markings; bullae small or minute .. .. *Halterorchis* Bezzi

(*b*) Proboscis well developed, slender, elongate, spear-shaped; half concealed sternite 8 more broadly and deeply indented or emarginate (V-shaped) posteriorly, not appearing centrally carinate or longitudinally sulcate; hairs on head distinctly denser and finer, those

on mesonotum denser, finer, leaving narrower, not entirely bare, streaks; abdomen above with finer, slightly denser, short hairs, and only partly densely tomented, without a peculiar pattern; bullae larger .. .. *Nothomydas* Hesse

Genus NOTHOMYDAS Hesse

Nothomydas Hesse, 1969: 290

This genus, which is now placed in the new tribe Halterorchini and of which the original description was based on a single ♂ specimen from the South West African side of the Orange River at Vioolsdrif, has since the publication of the description, been augmented by representatives of a closely related new species. The latter, composed of ♂♂ and a ♀, was collected at Port Nolloth in Namaqualand. To complete the description of the genus, the diagnostic characters of the ♀ representative, as well as some supplementary characters of the ♂♂ of the new species, are as follows:

Head much broader than thorax; interocular space on vertex moderately broad, broader than interocular space on head below, in ♂ quite $1\frac{2}{3}$–$1\frac{3}{4}$ as wide, in ♀ the space below is relatively broader relative to the interocular space above; eyes markedly large in ♂, markedly convexly globular, smaller in ♀; antennae as described and figured in 1969 (Hesse: 290, 294, fig. 18 B), but clubs in known ♀ more globular; central ocellar ridge on frons prominent and shining in both sexes; clypeus short, convex; buccal cavity relatively deep, in both sexes; rest of cephalic structures as described in 1969.

Wings comparatively short in both sexes, not reaching tip of abdomen, comparatively narrow; first posterior cell either narrowly opening on second vein or more broadly so and thus appearing very shortly stalked or sessile on costal margin; rest of wing characters as described in 1969 for the type-species.

Abdomen of ♂♂ as described for the type-species, but the modified lobe-like extension on each side of the partly hidden tergite 9 either strap-like or narrower and spine-like; abdomen in known ♀ broader, more dorso-ventrally depressed, also with 7 normal tergites and sternites, but partly hidden tergite 8 hoodlike over genital segment (tergite 9), and sternite 8, as in ♀♀ of the other Halterorchini, partly hidden, its hinder part indented V-shaped, the sides or limbs of the V somewhat inflated.

Hypopygium of ♂♂ as described and figured for the type-species in 1969 (Hesse: 293, fig. 18 B).

Genital segment, or modified tergite 9, of ♀ as described for ♀♀ of Halterorchini above, with a short, raised, central, carinate ridge and a spine-bearing acanthophorite on each side, and medially below these well-developed anal lobes.

Legs relatively short and as described for the genus in 1969, but front and middle femora with or without fine, bristle-like spines along inner surfaces below; front and middle tibiae with or without short, fine, bristle-like spicules, more distinctly present in ♀; hind tibiae with a row of spicules along outer part below, these in ♀ longer and more strongly developed; crown of spicules at

apices of tibiae rather markedly long, especially the hind ones; spicules on tarsi, especially on hind ones, also rather long; claws as described for type-species, but pulvilli sometimes narrower.

Integument of head with the central frontal ridge, head below and to a certain extent clypeus shining; pleurae either entirely shining or in part dull; integument of abdomen either mainly shining above or mainly dull in ♂♂, dull discally above in ♀, in ♂♂ finely setiferously punctured above; integument of rest of anatomy as described in 1969.

Vestiture in ♂♂ as described for ♂ of type-species, but in known ♀ shorter and sparser on front half of body, and fine hairs on abdomen above directed apicalwards on tergites 2–7 and sternites 3–7, those on venter much shorter and sparser than in ♂♂; hairs on legs either short or long and dense, especially on front and middle ones, slightly less so in known ♀, otherwise as described for the type-species in 1969.

From other Halterorchini this genus differs by the characters given in the key to the known genera.

The type-species is *Nothomydas gariepinus* Hesse and the other species is *Nothomydas namaquensis* n.sp. described below.

Nothomydas namaquensis n.sp.

This species, which was collected on the coast more to the south of the Orange River in Namaqualand, is very near the type-species *gariepinus* from which it differs in the following respects:

Body mainly black in ♂, in ♂ *gariepinus* the postalar calli, abdomen above, and to a variable extent the pleurae are more obscurely reddish brown; ♀ of new species with the sides of mesonotum, humeral region, 2 submedial, discal, posteriorly-abbreviated, narrow streaks, the postalar calli, and discal part of scutellum yellowish brown, the pleural parts, metanotum, tergites 1 and 2, discal parts of 3 and 4, and venter to a variable extent also yellowish brown to reddish brown; narrow yellowish white hind margins of tergites and sternites in ♂ more sharply defined than in *gariepinus*; humeral tubercles in ♂ dark, more yellowish in ♀, markedly tomented greyish white in both sexes; antennae in ♂ of type-species more yellowish brown, in ♂ of new species darker brown to blackish brown, paler yellowish brown in ♀; legs in ♂ of type-species yellowish brown, the front and middle femora appearing dark above, and tibiae and tarsi more yellowish, in ♂ of new species the legs are darker brownish to blackish brown, and slightly paler, more yellowish brown in ♀.

Integument as described for the genus; that of abdomen in ♂ more extensively shining than in ♂ of type-species, the dull, to a variable extent greyish-white-tomented parts less extensive, the hinder half of abdomen tending to be more shining, the abdomen above, apart from setiferous puncturation, also more finely transversely striated; in ♀ greater discal parts of tergites to tergite 5 dull and greyish white tomented, the sides more coarsely transversely striated, and intramarginal, longitudinal depression along tergites 2–5 rugulose; legs,

especially femora, distinctly finely transversely striated in both sexes, and hind ones more coarsely so basally and apically and slightly more so than in type-species.

Vestiture in ♂ distinctly longer and denser, but also mainly white on greater part of head, body and legs; that on head distinctly much longer and denser on vertex, behind antennae, on clypeus, and sides of buccal cavity, that on vertex and frons with a slight yellowish tint in certain lights, that on occiput and head below denser than in type-species; dense snow-white hairs along notopleural part, posterior margin of mesopleuron, pteropleuron and metapleural part as dense, but slightly longer; dense white ones on sides of tergite 1 and sides basally of 2 also slightly longer, appearing slightly more creamy yellowish in certain lights; fine, short, decumbent hairs in small punctures on abdomen above distinctly darker, more blackish, not so gleaming sericeous yellowish, and the longer ones along sides of abdomen above also darker, more brownish; hairs on venter very slightly denser than in type-species, darker, gleaming more brownish or blackish brown, and those on hypopygium as long and as dense, but gleaming more brownish; coxae, as in the type-species, mainly smooth below, but with the longish white hairs on sides of hind coxae denser; hairs on legs, especially on femora above, and more especially front and middle ones, conspicuously longer and denser, but also snow white, those on hind femora above with more long ones than in type-species, composed of whitish and dark ones, and those below also denser, sometimes gleaming slightly more yellowish brown; hairs on tibiae, especially front and middle ones, also much longer and denser, also snow white, those on hind tibiae with more numerous long ones along inner aspect, and rest of short hairs on hind tibiae distinctly darker, more brownish or blackish brown.

Vestiture in ♀ also mainly snow white, slightly shorter than in ♂, but also long and dense on head, humeral tubercles, notopleural part, hind margin of mesopleuron, on pteropleuron, metapleural part, and sides of tergite 1; fine, short, decumbent hairs in small punctures on abdomen above from tergite 2 apicalwards sparser than in ♂, directed forwards and gleaming pale sericeous yellowish or whitish; hairs on venter also sparser, gleaming more sericeous whitish and directed forwards on sternites 3–7; hairs on legs distinctly less dense, the long ones sparser, and all the hairs on femora and tibiae gleaming sericeous whitish; tomentum in ♀ denser, greyish white, more extensively present, especially on head, humeral tubercles, metanotum, ptero- and metapleurae, hinder part of hypopleuron, and broadly and conspicuously on abdomen discally above.

Head with the interocular space on vertex comparatively broader than in type-species, as 7:6, and space on head below proportionally also broader, the interocular space on head below in ♀ relatively broader than in ♂, as 5:4; antennae proportionally shorter than in *gariepinus*, slightly shorter in ♀ than in ♂, shorter than width of interocular space on vertex in both sexes, slightly longer than this width in the type-species, with the joints proportionally also

shorter than in the type-species, the inflated club, apart from its apical process, less truncated apically, the process itself more conically prominent; proboscis, though slender and similarly shaped (cf. Hesse 1969: fig. 18 B, top) distinctly much shorter, relatively shorter in ♀ than in ♂, only about 2–2,4 mm long (as against 3 mm in type-species), with the labella slightly more rounded apically in ♂ than in ♀; palps distinctly shorter and thicker than in type-species.

Wings clear hyaline as in the type-species; veins yellowish brown to brownish; second submarginal cell without any appendix; first posterior cell broader apically than in type-species, not sharply narrowed, more angularly subtending, or only shortly stalked, on costal margin, not so distinctly stalked apically as in type-species; axillary lobe relatively narrower; knobs of halteres slightly darker and darker in ♂ than in ♀.

Legs proportionally much shorter, the tibiae also curved, but basal part of hind femora slightly more curved; front femora without any distinct spines below (in ♂ of type-species there are a few slender spines); hind femora in ♂ with fewer and shorter spines below, only about 2 or 3 distinct ones in an apical outer row and 2 in the apical inner row, but in ♀ with 2 or 3 apically on inner aspect and 5 or 6 along outer aspect from about middle; spicules on hind tibiae in ♂ shorter than in ♂ of the type-species, in ♀ longer and stouter than in ♂; tarsi proportionally much shorter, the hind ones shorter, stouter and thicker in ♂ than in ♀, its basal joint proportionally longer; claws proportionally much shorter than in type-species, the pulvilli narrower and apparently slightly shorter, more so in ♀.

Hypopygium of ♂ similar to that of the ♂ of type-species (cf. Hesse 1969: fig. 18 B), but differs in having the curved, modified lobes or extensions of tergite 9 distinctly shorter, slightly narrower, less broadly strap-like, and with the hind margin of the truncated apex even more incised or emarginate; curved prongs or processes of sternite 9 comparatively shorter, more or less subequal in length (from basal bend to apex in side view) to dorsal length of tergite 7 (in type-species it is distinctly longer than tergite 7).

Genital segments of ♀ as described for the genus, with 5 detectable, slender, reddish golden spines on each acanthophorite, the third from base appearing longer, and the last two more slender; hind margin of sternite 8 indented U-shaped; tergite 8 with separated, setiferous punctures, and exposed sides of the sternite transversely substriate.

From 1 ♂ holotype, 4 ♂ paratypes, and 1 ♀ allotype in the South African Museum.

Length of body: about 9–10 mm
Length of wing: about 5,5–7 mm

Distribution

Namaqualand: Port Nolloth (South African Museum Expedition, October 1967).

MIMADELPHUS n.gen.

A single ♂ specimen from South West Africa submitted to me is referable to the new tribe Halterochini and is very near and in the same category as the genus *Nothomydas*. As certain, often slight, morphological differences, such as antennal characters, reduction of the proboscis, differences in venational characters of the wings, the degree of the development of the vestiture, and differences and anomalies in the structure of the genital structures of the ♂♂, have been found to differentiate genera in the Mydaidae, the occurrence of such differences in the ♂ specimen concerned points to a distinct and separate generic status for it.

The ♂ specimen of this new genus differs from ♂♂ of *Nothomydas* s. str. in having a much reduced and rudimentary proboscis, more deeply sunk in vertex, very much denser, fur-like vestiture on body, sparser and shorter hairs on each side just behind antennae, absence of hairs along hind border of mesopleuron, hairs on mesonotum separated by 3 distinct, longitudinal, bare streaks, very much shorter anal lobes, shorter, curved, lobe-like extensions of tergite 9 (cf. Fig. 4), longer, navicular sternite 9 with its longer, more slender, sharply-pointed, spine-like processes, and a very much smaller, shorter, aedeagal, rod-like structure which is not bifid or forked apically.

The probability that this ♂ may represent the unknown ♂ of *Halterorchis* Bezzi, which was described from the ♀ only and which also has a vestigial, or much reduced, proboscis and no hairs across hind border of the mesopleuron, is not excluded. The fact that antennal joint 3 is much longer, the alula of wings is much larger and more lobe-like, the third posterior cell is much more acute apically and its posterior vein more in line with that of first posterior cell, and the legs are proportionally shorter, excludes it from *Halterorchis*.

The type-species of this new genus is *Mimadelphus vellosus* n.sp.

Mimadelphus vellosus n.sp.

Body mainly black; antennae pale yellowish brown, the apex of joint 3 and apical part of clubs darker, more blackish brown; clypeus showing brownish through the hairs; buccal cavity and vestigial proboscis pale yellowish brown; following parts also yellowish brown: shoulders, postalar calli, hind border of mesopleuron, area below wing-bases, including most of pteropleuron, sutural parts between sterno- and hypopleurae, sides broadly of tergite 1, extreme sides of tergite 2, to a more obscure extent extreme sides of rest of tergites, and genital structures; sides of tergites 2–7 broadly and venter slightly more reddish brown; hind margins of tergites on sides more yellowish; sutures between tergites 1 and 2 and 2 and 3 more reddish; bullae shining black; legs with the coxae dark brownish, their apical parts more yellowish, the femora yellowish brown, darker above, subapically, paler below and apically, the tibiae more yellowish, hind ones darker apically, the tarsi brownish above, more yellowish below; claws yellowish, black-tipped.

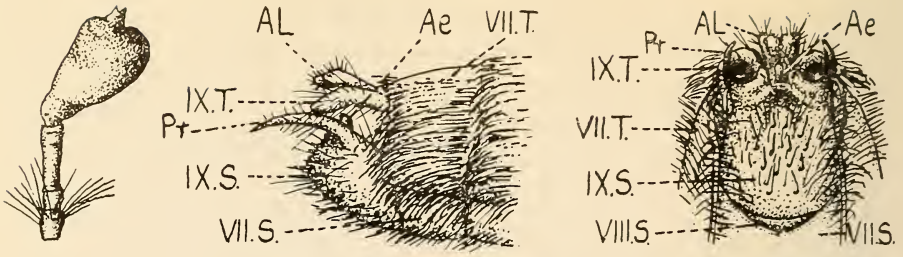

Fig. 4.

Left: Right antenna of ♂ *Mimadelphus vellosus* n.gen.et n.sp. Middle: Side view of apex of abdomen and hypopygium of same species.

Right: Ventro-posterior view of hypopygial structures. (Ae = aedeagus; AL = anal lobes; IX.S. = sternite 9; IX.T. = lateral lobe of tergite 9; Pr = process of sternite 9; VII.S. = sternite 7; VII.T. = tergite 7; VIII.S. = part of hidden sternite 8.)

Integument of central frontal part, clypeus, greater part of pleurae, hinder part of scutellum, sutural parts between tergites 1 and 2, sides of abdomen broadly, venter, and legs shining; mesonotum duller, with fine, microscopical, leathery texture; metanotum dull, and a broad, central, dorsal, partially-bare and partly dark-haired, black streak on abdomen above also dull.

Vestiture on head and body above dense, fur-like, vellose, reminiscent of that of the genus *Agaperemius* Hesse; that on sides of frons, clypeus and sides of face very dense, long, directed downwards, snow white; sides of frons anteriorly also with whitish tomentum; hairs on frons on sides medially just behind antennae sparser than in *Nothomydas*, erect and white; those on vertex anteriorly erect, white, and a dense cluster on each side of occipital part partly on vertex dense, white, directed more inwards and backwards; hairs discally on mesonotum not very dense, very slightly pale sericeous yellowish, arranged in 2 rows in anterior half, separated by a central, bare streak and by a sublateral, anteriorly-abbreviated, bare streak on each side, these 3 streaks coalescing behind middle to form a broad, discal, bare area; hairs on sides of mesonotum and on shoulders very dense, snow white, becoming sparser above wing-bases and across base of mesonotum; scutellum with 2 backwardly-directed, snow white tufts; metanotum with greyish white tomentum and no hairs; pleurae mainly bare, the hinder part of pteropleuron and metapleural part with snow white hairs, and the propleuron with some scattered white hairs; hairs on abdomen above granular, very dense, vellose, fur-like, mainly decumbent, those on tergite 1 submedially and on sides anteriorly more erect, snow white, as are also those on extreme sides of 2 and 3, and to a much lesser extent on extreme sides of rest of tergites; those across hind margin of tergite 1, on greater part of 2 discally, broadly on sides of 3–7 above more decumbent, directed backwards, dense, more creamy whitish, leaving a broad, but posteriorly-narrowing, central, black or dark streak, mainly covered with black, decumbent, granular, scale-like hairs, and with some scattered, pale ones, especially across hind margins of tergites; sides anteriorly

of tergites 3–5 also appearing dark, but covered with dark, fulvous brownish hairs; tergite 2 discally on each side also with a submedial, dark-haired patch; hairs on venter slightly less dense, whitish on sides of sternites, especially 1–4, the rest of the hairs appearing slightly fulvous in certain lights; hairs on legs mainly pale, long, dense and white on femora above, especially so along inner upper apical half of middle femora, and basally above on hind ones, and along hinder parts of front and middle tibiae; rest of hairs on legs shorter, gleaming more pale sericeous yellowish in certain lights; spines on hind femora below and spicules on hind tibiae more pale yellowish to pale fulvous yellowish, the rest of spicules on tibiae more whitish.

Head across eyes broader than thorax; eyes markedly large, convex; interocular space on vertex broader than interocular space on head below, as 30:20; vertex sunk in; antennae (Fig. 4, left), very close together, much shorter than thorax, joint 1 thickened, about $1\frac{1}{3}$–$1\frac{2}{3}$ times length of 2, only a little longer than broad, joint 3 comparatively short, only a little longer than 1 and 2 combined, slightly thickened apically; club dilated, pyriform, somewhat laterally compressed, in side view broadest subapically much beyond middle, a little longer than rest of the joints combined, its apical sensory area, around the crater-like tubercle, sunk in, the tubercle itself rather long and prominent, quite as long as antennal joint 2, the inner margin of sensory area and inner apical part of club somewhat emarginate and depressed; buccal cavity small; proboscis much reduced, only about 0,32 mm long; palps not detectable.

Wings rather narrow, the membrane wrinkled, entirely hyaline, but with a scarcely perceptible milky whitish tint in certain lights; costal vein, subcostal and anterior vein of anal cell yellowish, the rest of veins yellowish brown; second submarginal cell with a very short appendix; first posterior cell slightly narrowed apically, opening on second vein (or very shortly stalked on costal margin); discoidal cell sharply acute apically and shortly stalked; alula fairly well developed, almost quadrate; halteres yellowish.

Legs comparatively short and hairy, as described under vestiture; hind femora slightly clavately thickened, armed below with a single row of 5 or 6 distinct spines from a little before middle to a little beyond middle, ceasing before broadest part of femora, those towards the apex the longest; front and middle femora subspindle-shaped, without any spines; front and middle tibiae curved, the spicules on anterior aspect longer, more hair-like on middle ones where the hairs on posterior part are also longer as they are on upper, posterior, apical part of middle femora; hind tibiae only slightly curved in apical part, its row of spicules (4) along lower outer aspect fairly long and stoutish, spine-like, its crown of apical spicules also longer and stouter than those on other tibiae; tarsi rather short, progressively longer from front tarsi to hind ones, the spicules below hind ones also much longer and stouter, the hind basi-tarsus a little longer than claw-joint; claws curved down apically; pulvilli well developed.

Hypopygium (cf. Fig. 4, middle and right) as described for the genus;

navicular sternite 9 with some stoutish setae on slight tubercles ventrally and anterolaterally; aedeagal apparatus comparatively short, rod-like, not forked apically.

This unique ♂ holotype is in the Stuttgart Museum.

Length of body: about 11 mm

Length of wing: about 7,5 mm

Distribution

South West Africa (H. Walter, 1/3/1953). (Without any reference to geographical region, but judging from the distribution of species of the related genus *Nothomydas*, probably also from some sandy desert part in Great Namaqualand.)

NAMIBIMYDAS n.gen.

Two specimens, a ♂ and a ♀ and both somewhat damaged, from the Namib Desert, submitted by Professor E. Lindner, represent a remarkable new genus which differs from all known genera of Mydaidae, not only in the peculiar genital structures of the ♂, but also in other morphological characters.

As the abdomen in both sexes has only 7 normal discernible tergites and sternites and the usual eighth tergite and sternite of other genera concealed, reduced or modified, this genus is also to be placed in the new tribe Halterorchini.

It is characterized as follows:

Body moderately large, elongate, asilid-like; abdomen stoutish, elongate, cylindrical in ♂, slightly dorso-ventrally depressed up to penultimate segment in ♀.

Head (cf. Fig. 5) markedly broad, much broader than thorax, broader than in most other genera; interocular space on vertex proportionally very broad, displacing the eyes laterally to a very marked extent, proportionally broader in ♂ than in ♀; interocular space on head below more or less equally broad in both sexes, the inner margins of eyes in ♂ thus more convergent below; eyes proportionally large for the broad head, larger in ♂ than in ♀, the facets along anterior inner aspect only slightly larger than the rest, slightly larger in ♂; median ocellus present; antennae of ♀ missing in the specimen, but in ♂ comparatively short and stout, joint 1 slightly thickened, joint 3 columnar, broadened apically, the club elongate pyriform, longer than joint 3 as in the other Halterorchini, its sensory area however more latero-apical; clypeus prominent; medial lower part of buccal cavity rather prominently jutting out lip-like; proboscis very characteristic, spear- or lance-shaped, very long and slender, like that of species of *Cephalocera*, the labella of ♂ narrower, lance-blade-shaped and that of ♀ more spear-blade-shaped (cf. Fig. 5, right and left); palps distinct, thickened apically.

Thorax with the integument, including that of the pleurae, dull; propleural part rather inflated, prominent, the central prosternal sulcus rather

deep and distinct throughout; mesopleuron with hairs on upper posterior part; metapleuron dull, with hairs.

Wings well developed, with strong veins; venation like that of most Syllegomydaini and especially that of the genus *Afroleptomydas*; alula well developed, lobe-like.

Abdomen with 7 normal, unmodified, unconcealed tergites and sternites in ♀ and also 7 tergites in ♂, but only 6 discernible sternites in ♂, sternite 7 being concealed and displaced forwards by the greatly developed sternite 9 (cf. Fig. 6); tergite 8 in ♂ concealed, only partly exposed on sides as a lobe at base of tergite 9 (cf. Fig. 6, left, VIII.T.), in ♀ as in other genera of the new tribe, modified to form the hood over the genital segments; sternite 8 in ♂ concealed or not developed and, in ♀, partially or half concealed above hind margin of sternite 7 and modified to form a ventral plate the hind margin, or

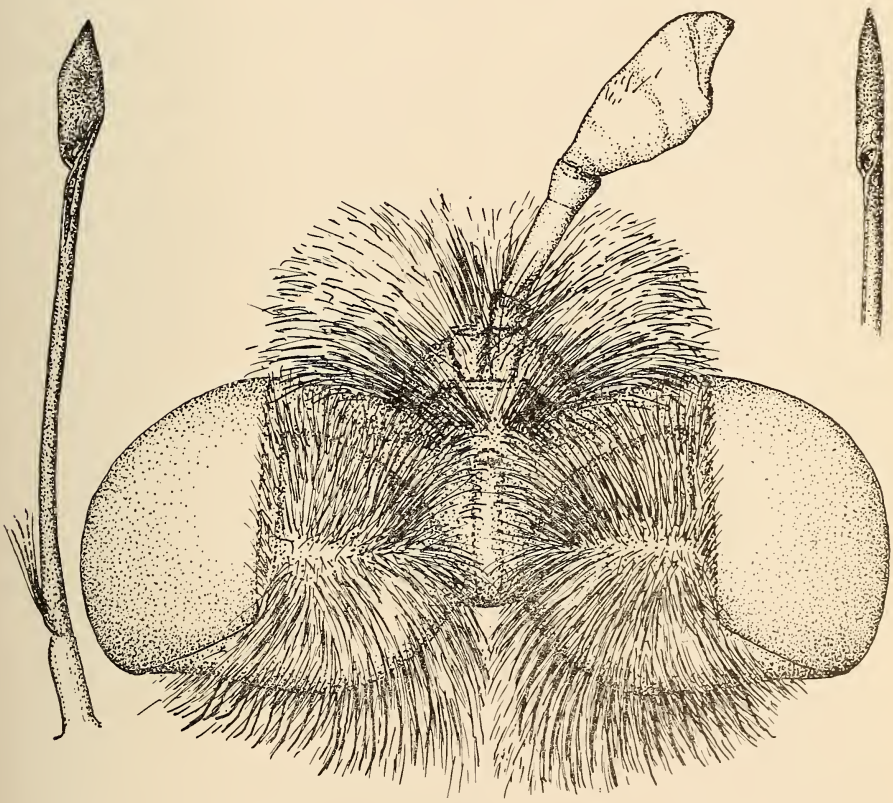

Fig. 5.
Dorsal view of head of ♂ of *Namibimydas gaerdesi* n.gen. et n.sp.
Left: Proboscis of ♀ of same species.
Top right: Apical part of proboscis of ♂.
All drawn to the same scale.

hinder part, of which is indented or emarginated V- or U-shaped (cf. Fig. 7, right); tergite 2, as in other genera, broadly transversely depressed across base; bullae on segment 2 minute in ♀.

Legs (much damaged in the specimens, some of the legs and tarsi missing) in both sexes however fairly long; trochanters (cf. Fig. 7, left) of front and middle legs distinctly produced more lobe-like in outer basal part than in most genera, and slightly smaller in ♀ than in ♂; hind femora slightly thicker than the other femora, armed with a double row of spines below; front and middle femora also with some spines below; tibiae with long and conspicuous spicules, those in the apical crown (spurs) markedly and conspicuously long as are also those on tarsi (probably an adaptation to the sandy and dune-sand environment); claws and pulvilli very strongly developed in ♂, less so in ♀, in which sex the pulvilli are also relatively shorter.

Vestiture well developed, with markedly dense, long, bushy, and finely granulate hairs on head (cf. Fig. 5), sides of mesonotum, metanotum, hind margin of mesopleuron, on pteropleuron, metapleuron, base of abdomen, to a lesser extent on rest of abdomen, hypopygium of ♂, on coxae, and femora; hairs on disc of mesonotum slightly shorter; those on abdomen above in ♀ shorter and less dense beyond tergite 2; tomentum on head and body well developed in both sexes.

Hypopygium of ♂ (cf. Fig. 6) remarkable, large; tergite 9 deeply indented U-like, divided dorsally into a lateral part or lobe on each side, with the well-developed anal lobes in between, and each lateral lobe depressed apically, the depression extending ventrally as an infolded sheet which is connected with the dorsal process or prong on each side of sternite 9; the latter enormously developed, *Argonauta*-shell-shaped, laterally compressed, ventro-laterally grooved on each side, keeled below, the entire structure displacing sternite 7 far forwards under sternite 6 so that only 6 abdominal sternites are discernible; sternite 9 itself centrally sulcate in posterior (or apical) vertical part, and connected on each side with a broad, flattened, dorsally slightly hollowed, apically slightly outwardly- and downwardly-directed, bluntly rounded process or prong which curves apicalwards from about middle of the sternite and each of which, on dorsal apical part of the sternite, is connected to the latter by more transparent chitin; tergite 8 almost entirely concealed, only an exposed lobe-like lateral part discernible, a projecting appendage or lobe (cf. Fig. 6, AP.) on each side of sternite 9 may represent an appendage or process on each side of the concealed sternite 8 as in some species of *Namadytes*; aedeagal part entirely hidden, discernible from a posterior view as a forwardly-bent hook, from the base of which there extend apicalwards 2 filament- or strand-like structures (cf. Fig. 6, right top); hairs on hypopygium dense and long on extreme sides of tergite 9, below anal lobes, on processes of sternite 9, posteriorly on latter, and on each side of concealed tergite 8 (projecting from under tergite 7), with the hairs posteriorly on hypopygium curved inwards and downwards hiding posterior vertical part of sternite 9.

Genital segments of ♀ (cf. Fig. 7, right) as in other genera of the Syllegomydainae, but with tergite 8 in form of a hood over the terminal, central, carinate ridge and acanthophorites; sternite 8 however half hidden under sternite 7, its hind margin indented, V-shaped, and with the sides of the V swollen and rugose; central carinate ridge of sternite 9 well developed, arched; acanthophorites each with comparatively short, broad, shoe-horn-shaped, blunt spines, hollowed dorsally.

The type-species of this new genus is *Namibimydas gaerdesi* n.sp. which I have great pleasure in naming for Herr F. Gaerdes of Okahandja who collected it, who is well known as a keen and enthusiastic collector of insects in South West Africa and who, from his extensive private collection, has contributed much interesting insect material from that part of southern Africa to museums in South Africa and in Germany.

Namibimydas gaerdesi n.sp.

This interesting species is characterized as follows:

Body-colour mainly black, with the lower apical half of antennal club appearing obscurely reddish, the sensory area more yellowish brown; proboscis black, its extreme base, lower part of buccal cavity, and the palps yellowish; thorax with the anterior spiracular area behind humeral tubercles, pleural part just below spiracle, the fossa between propleural and prosternal parts, sutural part above between humeral tubercles and mesonotum, notopleural part, outer part of postalar calli, middle part of hind margin of scutellum, scleritic area around wing-bases (partly encroaching upon or embracing also mesopleural, pteropleural, and metapleural parts), sutural parts on rest of pleurae and, in ♀, also 2 central streaks on metanotum reddish yellow to pale yellowish brown; these coloured parts, in ♀, tending to be more extensive, affecting even greater part of pleurae which tends to be more reddish brown; disc of mesonotum in ♀ also tending to show an obscure central and an obscure lateral reddish brown streak on each side; abdomen above mainly dark or black, in ♀ tending to be more dark brownish, becoming paler, more yellowish brown, posteriorly, the sides in both sexes also more yellowish or pale brownish, more so in ♀; hind margins of tergites yellowish white on sides, more broadly so across posterior lateral angles; bullae black in both sexes, small in ♀, very widely separated, surrounded by pale yellowish brown; venter yellowish brown, the hind margins of sternites 1–4 in ♀ and 1–6 in ♂ broadly yellowish white; genital structures of ♀ pale yellowish brown; extreme sides of tergite 9 and narrow hind margin of its lateral part in ♂, as well as greater part of hypopygial structures also pale yellowish brown, excepting posterior, shining-black, lateral and vertical parts of sternite 9; a small spot near posterior apical angle of lateral part of tergite 9 in ♂ yellowish; legs mainly yellowish in both sexes, the coxae in ♂, excepting the broadish pale yellowish brown hinder part, dark or blackish, the front and middle femora on upper outer aspect to beyond middle, and inner face of hind femora darkened, more brownish, especially in

♂, and apical parts of tarsal joints also darkened, and apical parts of claws black.

Integument of head and body mainly dull, covered with greyish white tomentum; sides of tergites, especially in ♀, more subshining, transversely rugulose and punctured, tergites 6 and 7 more extensively transversely rugulose; transverse basal depression across tergite 2 shining; hood-like tergite 8 in ♀ more shining, more coarsely punctate-rugose, as are also the semi-inflated hinder parts of sternite 8 in ♀; modified tergite 9 in ♀ coarsely punctured; venter shining, transversely grooved or wrinkled laterally, more so in ♀; sternite 9 and its dorsal processes in ♂ shining, its lower keel-like part, from just before middle, longitudinally striate; legs shining, the femora finely transversely striate.

Vestiture on head, body and legs mainly white, that on head long and dense, that on frons in front, antennal joints 1 and 2, clypeus, and genae more straw-coloured, more so in ♀; postvertical spines distinct, slender, bristle-like, yellowish; hairs on occipital part laterally behind eyes white, shorter than rest of cephalic hairs; palps with a tuft of long white hairs; base of proboscis with a pencil of long white hairs; hairs on mesonotum slightly less dense and shorter than rest of hair on thorax, but denser and slightly longer in ♂ than in ♀, with a faint straw-coloured tint in certain lights, inclining to be arranged in 5 streaks, corresponding with more or less 5 streaks of whitish tomentum, of which the

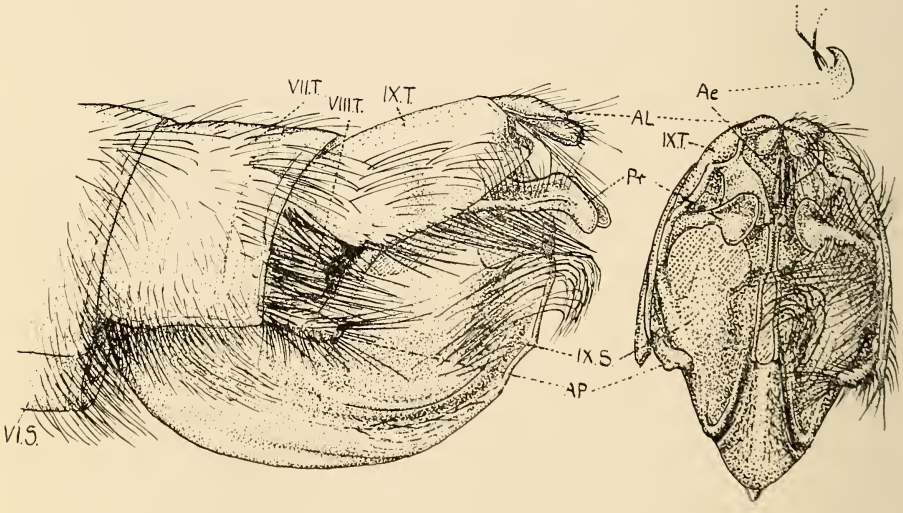

Fig. 6.

Side and posterior views of hypopygium of ♂ *Namibimydas gaerdesi* n.gen. et n.sp. The posterior view is drawn with the vestiture only on one side.

(Ae = aedeagal structure as far as this can be made out in specimen, the top right is a side view with all the parts not discernible; AL = anal lobes; AP = appendage of concealed segment 8; IX.S. = *Argonauta*-shell-shaped sternite 9; IX.T. = tergite 9; Pr = processes of sternite 9; VI.S. = sternite 6; VII.T. = tergite 7; VIII.T. = tergite 8.)

central one is narrow, the 3 middle hair-streaks, separated by 2 almost bare streaks, more evident in ♂; tuft on humeral angles, hairs along notopleural part, on postalar calli, and in front of base of scutellum dense, long, and snow white; those on metanotum also long, snow white; pleurae mainly bare, tomented, but hairs on upper hinder part of mesopleuron, on pteropleuron, and metapleural part in dense snow white tufts; those on sternal parts also long and snow white; hairs on abdomen long, snow white, long and dense basally on sides of tergites 1 and 2 and, in ♂, fairly long and dense on rest of tergites, below anal lobes, along upper lateral part of processes of sternite 9, sides below processes, posterior part of sternite 9, and on sides of concealed tergite 8; hairs on abdomen in ♀ shorter and sparser beyond tergite 2, slightly denser and directed forwards on last 2 tergites; hairs on venter much longer and slightly denser in ♂, shorter and sparser in ♀; hairs on legs also mainly white, long and dense on femora above, much more so in ♂, those in tibiae shorter, but longer in ♂ than in ♀.

Head (cf. Fig. 5) distinctly much broader than thorax, broader in ♂ than in ♀, quite 5,75 mm in ♂ and 4,96 mm in ♀; interocular space on vertex markedly broad, proportionally broader in ♂ (±3 mm) than in ♀ (± 2,2 mm); vertex on the whole not much sunk in, but central ocellar ridge ends on vertex in a fairly deep sulcus, the boss-like part on each side very prominent; antennae (missing in the ♀ specimen) nearly as long as width of interocular space on vertex in ♂, with joint 1 thickened, quite 1½ times length of 2, joint 3 stout, columnar, longer than combined length of 1 and 2, shorter than club, its apical part broadened; club elongate pyriform as shown in Figure 5; clypeus convex, somewhat shining, its apex slightly notched; buccal cavity fairly deep, its lateral margins sharply carinate, the middle part on lower margin projecting prominently ledge-like, more broadly so in ♂; proboscis slender, markedly elongate, javelin-shaped in ♂ (Fig. 5, right), spear-shaped in ♀ (Fig. 5, left), about 4,64–4,68 mm long, the labella narrow in ♂ and lance-blade-shaped, slightly broader and spear-blade-shaped and more sharply pointed in ♀; palps in ♂ more roundly inflated apically, in ♀ more subspindle-shaped.

Wings reaching tip of abdomen, clear, hyaline, with a faint milky whitish tint in certain lights; membrane much wrinkled; venation similar to that of the genus *Afroleptomydas*; veins rather stoutish, yellowish; first posterior cell slightly narrowed apically, either opening on second vein in ♀ (thus very shortly stalked apically on costal margin) or partly opening on second vein and partly on costal margin in ♂ (thus apically narrowly sessile on costal margin); second submarginal cell with an appendix basally; discoidal cell acute apically, meeting third posterior cell at a point; axillary lobe broad; alula well developed, lobe-like; halteres whitish.

Legs (much damaged in ♀ specimen and some tarsi missing in ♂ specimen) moderately long, hairy, the hairs on front and middle femora above and, especially, along inner upper aspect of hind femora markedly long and dense,

more so in ♂, and the hairs on tibiae also longer in ♂ than in ♀; front femora with 3 yellowish spines below in ♂ and 2 pallid ones in ♀; middle femora more slender, unarmed below; hind femora slightly thickened, with a double row of reddish yellow spines below (4–5 in inner row and 6–7 in outer one) on slight tubercles, the outer row ending in 3 or 4 more closely-spaced and shorter ones along outer margin of the apical femoro-tibial articulating cavity; tibiae with more or less a double row of markedly long yellowish red to reddish spicules along outer lower part, ending in a crown of conspicuously long apical ones; tarsi also with markedly long reddish spicules on joints below, the basal joint of hind tarsi longer than claw-joint; claws strongly developed, more so in ♂; pulvilli in ♂ strongly developed, broad, about reaching curved apices of claws, in ♀ distinctly less strongly developed, narrower, shorter than in ♂, not reaching apices of claws.

Hypopygium of ♂ (cf. Fig. 6) as described for the genus.

Genital segments of ♀ (cf. Fig. 7, right) as described for the genus; acanthophorites each with about 8 spines of which the first basal spine is slender and more rod-like and the other 7 (only 2 on each side in the specimen are still present, the slightly hollow bases of attachment of the lost ones however indicate the original total) are broad, shortish, bluntly rounded, cuneiform or shoehorn-shaped, and hollowed above; hinder V-shaped emarginated part of semi-concealed sternite 8 thickened or inflated, rugulose, and sparsely punctured

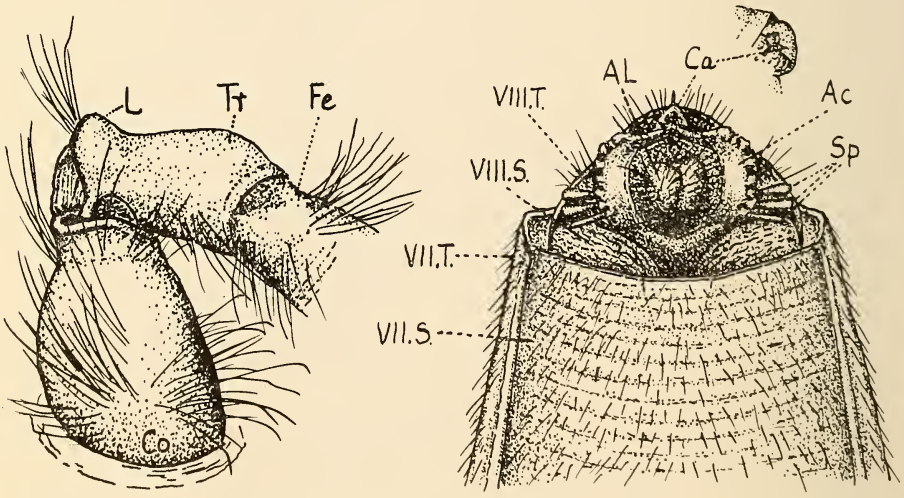

Fig. 7.

Left: Ventral view of coxa, trochanter and part of femur of middle right leg of ♂ *Namibimydas gaerdesi* n.gen. et n.sp.

Right: Posteroventral view of genital segments of ♀ *Namibimydas gaerdesi* n.gen. et n.sp. (Ac = acanthophorite; AL = anal lobes; Ca = central carina (ventral and side views) of last ♀ genital segment; Co = coxa; Fe = femur; L = flattened lobe-like extension of trochanter; Sp = spines of acanthophorite; Tr = trochanter; VII.S. = sternite 7; VII.T. = tergite 7; VIII.S. = sternite 8; VIII.T. = tergite 8.)

on each side, each puncture lodging a short hair.

From the 1 ♂ holotype and 1 ♀ allotype in the Stuttgart Museum.

Length of body: about 21–24,5 mm

Length of wing: about 16–19 mm

Distribution

South West Africa: Namib Desert: Walvis Bay (F. Gaerdes, 24/1/1939 (♀) and 20/1/1940 (♂)).

The ecology and biology of this interesting genus are unknown, but the various morphological features of the type-species, such as its excessive hairiness, the hairy legs with the markedly long tibial and tarsal spicules, and the comparatively broad, shortish, shoe-horn-shaped spines on the acanthophorites of the female, indicate adaptive responses to a hot and sandy environment.

Subfamily Mydainae

PARECTYPHUS n.gen.

One of the specimens of Mydaidae from South West Africa, kindly submitted to me by Professor E. Lindner of the Stuttgart Museum, belongs to a new genus of Mydainae and very near to the genus *Ectyphus* Gerst. Up to now the genus *Ectyphus* appears to be restricted to the southern and eastern Cape, Natal, Transvaal, and possibly East Africa. It is an eastern genus of which the species occur in semi-wooded and forested parts. This new genus may be considered as representing *Ectyphus* in the Namib Desert of South West Africa. Though not stated on the locality label this mydaid, like *Ectyphus*, probably also inhabits a wooded environment, even in the treeless Namib, namely that found along the banks of the Kuiseb River.

It differs from the genus *Ectyphus* in the following respects:

Body comparatively and markedly broader, the head and thorax proportionally much broader, the abdomen in the male sex less cylindrical, more flattened dorso-ventrally. Its general appearance suggests that of a cricket.

Integument very similar to that of *Ectyphus*, but the disc of the mesonotum more finely leathery or rugulose, not so coarsely rugulose and also less dull; that of abdomen above smoother, though also setiferously punctured and with an intramarginal streak of coarse puncturation on sides of abdomen.

Vestiture with the hairs on head in front, thorax above, and on pleurae in the ♂ on the whole distinctly longer and denser than in even the most hairy species of *Ectyphus* known.

Head markedly broad, only slightly broader than across broadest part of the broad thorax, the latter proportionally less broad in *Ectyphus* making the head appear much broader; interocular space on vertex proportionally much broader, much broader than distance from base of ocellar ridge on vertex to base of clypeus which distance, in *Ectyphus*, is equal, subequal to, or even a little shorter than, interocular space; interocular space on head below pro-

portionally also broader; clypeus flat-nose-shaped as in *Ectyphus*; proboscis also reduced and short, resembling that of *Ectyphus*; antennae (cf. Fig. 8, left) proportionally shorter, much shorter than mesonotum, the clubs more pyriform, not so elongate-pyriform or spindle-shaped as in *Ectyphus*, the apical sensory area and apical prominence less produced.

Wings with 3 submarginal cells, not 2 only as in *Ectyphus*, the normal second has the basal appendix (which is present in all known species of *Ectyphus*) joined to the posterior border vein of the marginal cell thus dividing the first submarginal cell into 2 cells and thus forming the 3 submarginal cells, of which the third is an enclosed cell; first posterior cell broadly opening on costal margin apically.

Legs as in *Ectyphus*, but hind trochanters without any spines or processes; hind femora also markedly thickened, but more clavately so, their apices more narrowed, armed below in broadest subapical part and also sublaterally in apical part with stoutish spines on tubercles; front and middle femora unarmed below; front and middle tibiae armed with longer, stouter, spine-like spicules than in *Ectyphus*, and apically with much longer apical spicules; hind tibiae centrally carinate below as in *Ectyphus*, the carina also ending apically in a blunt process, but the spicules on hind tibiae more developed and with 2 long apical spicules on outer side of apical tibial process; tarsi with much stiffer short hairs and longer spicules; claws more strongly developed and longer, and the pulvilli well developed.

Abdomen markedly broad and flattened dorso-ventrally, even in ♂, more so than in some ♂♂ of *Ectyphus*, otherwise as in latter genus; tergite 8 concealed, but sternite 8 exposed as a scoop-like sclerite below and taking the place of the normal sternite 9 of most Mydaidae; lateral lobes of tergite 9, unlike the

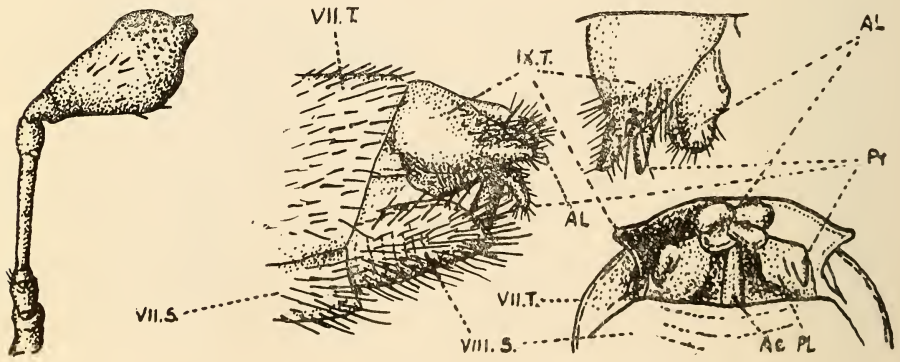

Fig. 8.

Right antenna of ♂ *Parectyphus namibiensis* n.gen. et n.sp.
Middle: Left view of posterior end of abdomen and hypopygium of same species.
Right top: Dorsal view of left lobe of tergite 9 and anal lobes of same species.
Right bottom: Posterior view of hypopygium.
(Ae = aedeagus; AL = anal lobes; IX.T. = lobes of tergite 9; PL = plate bearing process (Pr.) of hidden sternite 9; VII.S. = sternite 7; VII.T. = tergite 7; VIII.S. = sternite 8.)

much rounded or subangular, half-concealed, lateral lobes of *Ectyphus*, well developed, broad, prominent, and produced spinelike posteriorly on each side (cf. Fig. 8); sternite 9 not discernible, probably modified and in part represented by the transverse, shield-like plate (cf. Fig. 8, Pl.).

Hypopygium (cf. Fig. 8, middle and right) of ♂ differs from that of ♂♂ of *Ectyphus* in having the process or prong on each side of the concealed sternite 9 not curved inwards or tongs-like, but produced posteriorly on each side as a downwardly-bent hook, without any projecting appendage below, the base inside of each hook, from a posterior view, arising from a transverse plate (cf. Fig. 8, right below) which in part may represent sternite 9; aedeagal apparatus columnar and, as far as can be seen in the unique ♂ specimen, in form of a downwardly-directed, slightly laterally-compressed tube (cf. Fig. 8 Ae), without any cowl-like or inverted cup-like cap as in *Ectyphus*.

This new genus of South African Mydainae, with 3 submarginal cells in the wings, alters my definition of the subfamily (Hesse 1969: 9, 19, 364, 365) in which it was stated that the wings have only 2 submarginal cells and that the second opens either on the costal margin or on the second vein, and that a posterior cross vein is present or not.

In this new genus there are 3 submarginal cells, the second opens, as in *Ectyphus*, on the second vein, and a posterior cross vein is also present.

To accommodate this new genus and to correct statements as to the characters of the known African genera of the Mydainae the following revised part of the key to the subfamilies and genera of African Mydaidae is proposed.

1(*a*) Wings with 2 or 3 submarginal cells, the third, if present, formed by bisection of the first by the extension of the basal appendix of the second .. 2 (Subfamily *Mydainae* Beq.)

(*b*) Wings with 3 submarginal cells of which the second is in form of an enclosed and apically-stalked cell between the first and third .. Subfamily *Diochlistinae* Beq. (Non-African)

2(*a*) Second submarginal cell opening on second vein and with an appendix, or extended and bisecting appendix (vein) at base; hind border of wings with a distinct cross vein; clypeus broad, convex, flat-nose-shaped; antennal joint 3 much longer than 1 and 2 combined; hind femora markedly thickened, incrassate, usually with more than 2, usually 4, rows of spines below; hind tibiae compressed, medially carinate below, the carina ending in an apical process or spine in ♂♂ 3

(*b*) Second submarginal cell opening directly on costal margin, usually without a basal appendix; hind border of wings without a cross vein; clypeus not flat-nose-shaped; antennal joint 3 short, or very short, shorter than 1 and 2 combined; hind femora usually less markedly incrassate, with fewer, or only 2, rows of spines below; hind tibiae usually without a carina below 4

3(*a*) Wings with only 2 submarginal cells, the base of second with an appendix; head and body narrower, the abdomen in ♂♂ more cylindrical or subcylindrical; hind trochanters with 1 or 2 spines below; spicules on tibiae shorter, less developed; lateral lobes of tergite 9 in ♂♂ less produced, more rounded, lobe-like, or only subangular; processes of sternite 9 in ♂♂ curved more inwards, blunter, with a distinct palp-like appendage below; aedeagal apparatus stoutish, conical, ending apically in a cowl-like cap; terminal part of oviscape in ♀ usually withdrawn into segment 7 .. .. *Ectyphus* Gerst.

(*b*) Wings with 3 submarginal cells of which the third (enclosed) is formed by the bisection of first by the basal appendix of the second joining anterior vein of normal first sub-marginal; head and body markedly broad, the abdomen in ♂ broader, more dorso-ventrally flattened; hind trochanters without spines; spicules of tibiae more developed, longer; lateral lobes of tergite 9 in ♂ well developed, prominent, produced spine-like; processes of sternite 9

directed posteriorly, bent down hook-like apically, without any projecting appendage; aedeagus columnar, slightly laterally compressed, without a cowl-like cap
♂ *Parectyphus* n. gen.

4(*a*) Antennae shorter, the clubs normally dilated or inflated, not constricted at middle, not appearing deformed .. .. *Rhopalia* Macq. (from Egypt)

(*b*) Antennae longer, the clubs enlarged, constricted at middle, their basal part broadened or extending lobe-like laterally, or with lobe-like extensions, appearing deformed or malformed .. .. *Perissocerus* Gerst. (North African)

The type-species of the new genus *Parectyphus* is *Parectyphus namibiensis* n.sp.

Parectyphus namibiensis n.sp.

The ♂ holotype of the type-species is characterized as follows:

Body mainly black; antennae blackish brown, the clubs more yellowish brown, becoming paler in apical third, but apical tubercles blackish; buccal cavity and proboscis yellowish brown; anterior thoracic or shoulder spiracles, sides of mesonotum above wing-bases, and postalar calli more reddish brown and so is the area below wing-bases; hind margins of sternites 2 and 3 slightly yellowish brown; hypopygial parts yellowish brown; legs with the femora dark reddish black, the knees yellowish brown, the front and middle tibiae and tarsi also reddish black, the hind tibiae more dark reddish brown, their tarsi also reddish black; claws yellowish brown, black-tipped.

Integument of central part of frons and clypeus smooth and shining; that of mesonotum dull, finely rugulose; scutellum dull, finely rugulose, its hind border, posterior to a slight transverse depression, finely longitudinally rugulose; metanotum dull, finely rugulose, but with a few transverse rugae, especially on sides; pleurae mainly shining, but posterior border of mesopleuron, parts of sterno- and hypopleurae, opposite middle coxae (pore region), upper part of pteropleuron, and to a certain extent metapleural part, wrinkled; inflated lateral part of tergite 1 longitudinally striated; abdomen above transversely depressed just behind base of tergite 2, rest mainly smooth, but not too densely setiferously punctured, denser so posteriorly, but discal part of lateral lobes of tergite 9 mainly smooth, though showing fine, shallow, transverse striation in certain lights; venter smooth, shining, with sparse, setiferous puncturation in basal half, becoming denser posteriorly, sternite 7 with some transverse rugae posteriorly and 8 more coarsely transversely rugose and setiferously punctured; legs mainly shining, the femora transversely striate, the hind ones more coarsely so basally.

Vestiture with very dense and long, silvery-gleaming, snow white hairs on head, those on sides of frons in front and on clypeus directed downwards awning-like, also with whitish tomentum on sides of frons, face, and occiput; hairs on vertex and less dense and shorter ones on head below also silvery-gleaming snow white; vertex without any distinguishable, post-vertical spines or setae; first antennal joint bare, the second with a crown of a few hairs; hairs on mesonotum arranged in punctures also entirely silvery-gleaming snow white, but much shorter than on head, denser and longer only along noto-

pleural part and in front of scutellum, discally absent from more or less 5 longitudinal streaks, the middle 3 more evident, hairs also absent from postalar callar region and along middle of scutellum; metanotum bare; hairs across hind margin of mesopleuron, on pteropleuron, sides of metasternum, outer sides of middle and hind coxae, tergite 1, especially sides, and on anal lobes, long and silvery-gleaming snow white; those on rest of abdomen above not very dense and in setiferous punctures, those on lateral lobes of tergite 9, sparse ones on venter, dense, stouter and longer ones on sternite 8, those on prosternal part, front coxae, on discal parts of middle and hind coxae, and on legs, including the spines and spicules, dark or black.

Head with joint 1 of antennae (cf. Fig. 8, left) only slightly thickened, only about 1,4 times length of 2, joint 3 only a little more than twice length of 1 and 2 combined, slightly thickened in the joint-like apical part; club slightly longer than joint 3 (as 6:5), dilated pyriform, its base slightly constricted neck-like, broadest at about apical third, with short, scattered, black hairs, arranged more or less transversely and more on outer side from about basal third to apical third, the apical part of club subtruncate on inner aspect and with the tubercular prominence on outer apical aspect rounded, crater-like and with a short central style; clypeus narrowly separated from inner margins of eyes; lower middle part of buccal cavity rather prominent, lip-like; proboscis shorter than antennal joint 3, its labellar part subequal in length to rest or basal stem, covered with fine, short spinules; palps minute.

Wings projecting a little beyond apex of abdomen, hyaline, with a very faint milky white tint, the membrane much wrinkled; veins yellowish brown, more yellowish in basal part, the costal vein appearing dark due to the short black setae along its course to about level of first posterior cell; venation as described for the genus; alula broad, lobe-like; first posterior cell broadly opening on costal margin; halteres dark, the knobs black.

Legs with the hind femora clavately thickened, slightly curved basally, broadest part at about apical third and, apart from the rather stiff setae-like and short hairs, are armed below with 2 rows of stoutish spines on slight tubercles, mainly concentrated in apical broadest part, the outer row beginning as isolated spines from near base, the inner row from about or beyond middle, in addition there are an outer lateral row of 3 or 4 spines in apical part, a few irregularly-situated ones on inner lateral aspect, and a few dorsal ones in apical part or half; front and middle femora covered above with rather long stiff hairs and longer, setae-like hairs, the middle femora more curved than front ones; front and middle tibiae with fairly dense, stiff, black hairs and long, spine-like spicules, the apical ones below markedly long; hind tibiae with much finer, shorter, and sparser hairs, denser towards apex, and with fewer, shorter, and finer spicules, the apical ones on outer side of apical tibial process longest; apical process on hind tibiae below only moderately long and stout; tarsi with dense, stiff, black hairs and long spicules, the front and middle tarsi shorter than their tibiae and also shorter than hind tarsi, the latter also shorter

than their tibiae and with the basal joint longer than the claw-joint (minus claws); hind claws longer than the others, and all claws sharply bent down apically.

Hypopygium (cf. Fig. 8, right) as figured and described for the genus.

The unique ♂ holotype is in the Stuttgart Museum.

Length of body: about 15 mm

Length of wing: about 12,5 mm (the tips of both wings broken off in the specimen).

Distribution

South West Africa: Gobabeb (23.3 S. 15. O E. 408 m.). This locality name is not shown on maps, but is about 112 km south-east of Walvis Bay on the Kuiseb River in the Namib Desert and, at present, is the site of the Namib Desert Research Station.

Summary

In this paper, an addendum to my 'Revision of the Mydaidae (Diptera) of southern Africa', three new genera and sixteen new species from the Namib Desert and other parts of South West Africa are described. The genus *Namamydas* Hesse, described in 1969, is sunk as a synonym of *Namadytes* Hesse and a key is given to separate the known species of the latter. A new tribe Halterorchini is erected to accommodate the anomalous genera *Halterorchis* Bezzi, *Nothomydas* Hesse, and the two new genera *Mimadelphus* and *Namibimydas*. A short descriptive key for the separation of these genera is appended. A revised key to the subfamily Mydainae, to include the new genus *Parectyphus*, is also given. In 8 text-figures certain genital structures which help to distinguish some of the new species and the more important structures of the new genera are illustrated. A short list of the more important bibliographical references is added.

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